

THE MICHIGAN FARMER,

A WEEKLY JOURNAL OF AFFAIRS

Relating to the Farm, the Garden, and the Household.

NEW SERIES.

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The Michigan Farmer,

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The Farm.

STATE AGRICULTURAL COLLEGE.

SUGGESTIONS AS TO ITS MANAGEMENT.

BY THE EDITOR.

The Boarding Hall and its Management.

The Boarding Hall of the Agricultural College at Lansing is under the charge of Mr. S. A. Lane, the Steward, whose duties are almost similar to those of the proprietor of a hotel. He provides the supplies, and has charge of the building in all its several departments of lodging rooms and furniture, kitchen and culinary arrangements, laundry and its appurtenances. There is no more important post connected with the institution. He has also committed to his care, the charge of the students and the keeping up of good order, and obedience to the regulations. At certain hours the students are required to be in their own rooms at study, and are not permitted to visit or entertain their fellow students, and at ten P. M. a bell is rung, warning all to bed, and in fifteen minutes afterwards, another bell is rung, for all lights to be extinguished. All deviations from these rules are required to be reported.

The supplies of the Boarding Hall may be divided into three sections, as follows:

1. Farm productions; 2. Merchandise; 3. Meats; 4. The servants.

From a memorandum of articles used in the Boarding Hall since the first of April, I find that the various supplies, and help summed up as follows:

1. The Farm supplied 45 bushels of potatoes, 12 bushels of roots, 400 pickles, 100 lbs of salt pork 90 quarts of milk, 10 cord of wood 24 hours of work, 16 hours use of team, and the keep and care of horse for Steward's use, \$69.00 Of farm productions purchased, there has been 245 quarts of milk, 82 lbs of lard, 800 lbs of corn, flour, 12 bbls of fine flour, 80 lbs of butter, 840 dozens of eggs, at a cost of.....218 15

2. Groceries and store goods amount to.....\$267 15

3. The meats are, 300 lbs corn beef at 5 cents, 1,800 lbs fresh beef at 6 and 7 cts, 600 lbs ham at 10 and 11 cents, and a few pounds of lard, the whole is.....194 28

4. The salaries in this department are, including Steward.....170 49

Miscellaneous items inclusive of breakages, &c.....15 00

Total.....\$14 87

Being at the rate of \$5.391 for each of the persons charged with board.

The return made for this expenditure is the labor of the students, and the balance due by them. As the labor is expended upon the farm, it is readily seen that unless the farm is productive of crops, the labor must be paid for in the increased value of the real estate, and must be accounted for as an investment by the State.

As yet it is very evident, that the largest portion of the labor of the students has been expended in getting land cleared that would produce crops, which would serve to support live stock that could be used for the supply of this Hall. Last year some wheat was raised, and also corn and potatoes, of which latter crop there has been enough; but there was no land in a condition to give a supply of hay or of forage. Hence it was inadvisable to purchase any animals either for supply of milk or of meat.

The term of the College lasts for eight months, and in the article of meats alone, it will be seen that if we take the month of April as a guide for the year, there would be a consumption as follows:

Meat of cattle, 16,000 pounds, equivalent to 26 head averaging 1,200 pounds each of live weight.

Meat of swine, 5,600 pounds, equal to 28 head of hogs averaging 200 pounds of pork each.

There is no mutton in this calculation though one of the healthiest of meats, and the reason is that none is offered for sale in this market. Three sheep might easily be used per week in this establishment, if we had them, and if they yielded only forty pounds of dressed mutton per carcass, it would make a difference at the end of the season of a less consumption of cattle alone to the number of six head.

To keep the Boarding Hall supplied with meats, it is requisite that the Farm should be able to send in about fifteen head of steers, weighing when ready to kill 1,400 to 1,600 pounds live weight; 100 head of sheep, and at least 25 head of swine, weighing 250 lbs when dressed. For this last kind of stock the Boarding Hall itself produces a large amount of food, with which it should be credited, and which, if there were proper facilities and structures, would prove valuable as a source of revenue; for with the coarse grain of the Farm, and the swill of the establishment, a large surplus of pork might be raised with ease. A good piggery is a necessity that should be erected at the very earliest day, as for every day that we are without it there is a loss accruing from waste of what should be made valuable.

Another kind of stock that is needed, and for which the farm will be in readiness the present season, is milk stock. It will be noted that a large proportion of the milk with which the table has been supplied for the last month has been purchased at the rate of five and six cents per quart. This was impossible to be avoided. There are now on the farm but five cows, only one of which gave milk at the commencement of the term. Since that time two have calved, and now there is a fair supply, the calves being taken off, but not enough. A supply of milk in place of coffee or tea is desirable, and would be a very great economy in other articles, as many would prefer it, and it would in some degree supply the place of meat. There should be at least from twelve to fifteen cows kept for the supply of the Boarding Hall. These would not supply it with butter. But it might be found after some time that that article could also be made in sufficient quantities to save all cash outlay.

The consumption of eggs will seem large, but it is not quite at the rate of one egg per day to each person in the establishment. For a supply of either eggs or poultry, there has as yet been no provision made, and this also is a want to be supplied at an early day.

After a close examination of the method and arrangement pursued in the Boarding Hall, and a residence in it, we are satisfied that the closest economy is pursued and carried out, that is capable of being practiced, with the somewhat limited facilities which such a large establishment as yet is confined to.

Among the improvements which time and

means will undoubtedly introduce, will be the use of the steam engine for laundry and other purposes. There is now set a small steam boiler that aids materially in the cooking, but there is no engine by which labor could be saved, and economy practiced in the employment of help. As these improvements will reduce the price of board, it is important that they should be introduced as soon as the funds of the institution will permit.

One point lacking in this department is a system of accounts. Of the method to be adopted to supply this deficiency we wrote last week, and a longer experience, and farther examination of the details of the conduct of such an establishment, confirms us in the propriety and completeness of the suggestions then made. Should this institution progress, the boarding halls will increase in number and the accounts become more and more complicated. An early introduction of system and order in this department is in the highest degree desirable.

The Philosophy of Respiration—Use of the Lungs.

BY HENRY GOADBY, M. D., F. L. S.
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Respiration is the peculiar process by reason of which certain gaseous impurities are removed from the blood of animals, or from plants, and a more congenial atmosphere imparted to them. In the higher animals, blood is distributed from the left side of the heart to a system of arteries, and by them given to millions of very minute vessels called capillaries, from *capillus*, a hair. These latter vessels constitute the important parts of the structure of most tissues, and it is their peculiar function to make, or secrete something out of the blood that is supplied to them. This something will always be of the same kind, in the same tissue, and in accordance with the nature of the particular tissue: thus, salivary glands abstract from the blood that passes through them the elements out of which saliva can be formed; the true skin appropriates only what is necessary to produce the horny layer, or cuticle, which is placed over the entire surface of the body to protect the delicate plexuses of nerves distributed to it in immense quantities, and the vascular layer of the skin, from atmospheric influences. Thus it will be seen that all the tissues and glands of the body, except the liver, have pure and healthy blood given to them to form from it whatever is consistent with their peculiar function, and in addition to the particular element that each requires, they all extract a modicum of oxygen gas. But while engaged in manufacturing, as it were, new compounds from the blood, certain waste materials occur, which, as the tissues have no room for, and cannot retain, must be got quit of simultaneously with their production; the waste is *carbonic acid gas*, and this is given to the blood in place of its oxygen, so that the volume remains the same. As soon as the capillaries have obtained all they require from the blood, it is given to the veins to be conveyed first to the liver, and secondly to the right side of the heart. The blood, instead of possessing the beautiful bright vermilion color it had when leaving the left side of the heart, has returned of a purplish color, so dark that it is almost black, to the right side; it has lost all its nutriment, especially its oxygen, and has become altogether unfit to support life, unless it can renew its nutritious elements. To accomplish this it is sent to the lungs through vessels called pulmonary arteries, and there it is brought in contact with oxygen, which it appropriates, giving in return carbonic acid; it will now be apparent that the presence of the latter gas is the reason of the black color of the venous blood, and that as soon as oxygen has been absorbed the blood resumes its vermilion tint; it is then conveyed from the lungs by vessels known as pulmonary veins to the left side of the heart, to be re-distributed to all parts of the body. From this it will appear that the function of respiration consists of two distinct acts—the liberation of carbonic acid, and the deposition of oxygen—both being necessary to the due per-

formance of the function, for if either be in abeyance, the process is incomplete.

The paramount necessity for respiration results from the fact that all organic substances have a tendency to decay, even at the time they are most actively employed in performing the actions of life; one of the chief products of this decay is carbonic acid. A large quantity of this acid is set free during the decomposition of every form of organized matter; the carbon of the tissue combining with the oxygen supplied by the air. Thus after death, both in the plant and in the animal, the formation and liberation of carbonic acid goes on with great rapidity; it also occurs to a great extent in the period that precedes death, when a general decomposition of the tissues is taking place.

When plants become unhealthy, the extrication of carbonic acid takes place in greater amount than its fixation from the carbonic acid of the atmosphere; and the same changes occur in the period that precedes the annual fall of the leaves, this tissue being no longer capable of performing its proper function, by its incipient decay, gives rise to an increased quantity of carbonic acid, which is set free.

In the animal body, during the progress of many diseases which originate a sudden disposition to a remarkable decomposition of the solids, and fluids, the same thing takes place. In eruptive fevers, the quantity of carbonic acid set free in respiration is greatly increased, notwithstanding that the body remains perfectly at rest; the blood is frequently of dark color, clearly indicating that it has not been fully oxygenated, or entirely freed from the excess of carbonic acid. The large quantity of fluid contained in their bodies, together with the softness of many of the tissues of animals, causes them to be more susceptible of this kind of decomposition than plants: so too, the waste of warm-blooded animals, by reason of their greatly increased temperature. When a mammal hybernates, he is reduced to the condition of a cold blooded reptile, and the waste of the tissues is minimised to so great a degree that, the least exercise of the respiratory function will suffice to get rid of the small amount of carbonic acid that is produced.

Another source of the rapid production of carbonic acid is peculiar to animals, and results from the great and sudden changes which occur to the muscular and nervous systems, during their period of activity. There is strong presumptive evidence that the waste or decomposition of muscular tissue is precisely equal to the force with which it is exerted; every exhibition of muscular force, producing a change in the constitution of the tissue: and the same rule is, no doubt, equally true of the nervous system. Hence it will be apparent why men possess a stronger power of respiration than women; some men, more than others, depending solely upon the amount of physical action or nervous excitability to which they are accustomed.

There is yet another source of carbonic acid, namely, that which is generated directly from the elements of the food, and this process appears to be limited to the warm-blooded animals. The quantity generated, varies considerably in different animals, and even in different states of the same individual; and it is regulated by the condition of the temperature of the external atmosphere, thus, if the thermometer be low, more heat is required, and must be generated to supply this want, whereas if it indicate a high temperature, less vital heat will suffice. Hence it will be apparent that there are three distinct sources of carbonic acid in the animal body: Firstly—the continual decay of the tissues, common to all organized beings; Secondly—the change peculiar to the muscular and nervous tissues; and third—the direct conversion of the carbon of the food into carbonic acid, which is a peculiarity of warm-blooded animals.

The diversity in the form of the external organs of respiration in the animal kingdom, is very considerable, although the generality of a plan is maintained; they always consist of a very extensive surface, remarkable for its intense vascularity, and, in the vertebrated

animals, the extreme minuteness of the vessels; the object to be attained is to bring the blood into close proximity with the surrounding medium. This medium may be either water or air, and therefore two distinct forms of apparatus are necessary to adapt the organs to these conditions respectively. In the lowest animals, the microscopical animalcula, the respiratory apparatus is restricted to the vibratile cilia which, in many species, covers the entire surface of the body; the cilia are, also, the sole locomotive organs, and carry the body through the water, so that it is constantly in contact with fresh volumes of oxygen. The tubicolous annelides, (red-blooded worms) have ramified tufts, or elegant plumose expanded branchiae, or gills, covered with vibratile cilia and symmetrically arranged around the head or anterior part, of the body, as in *Sabella*, *Serpula*, *Terebella*, *Amphitrite*, &c. These organs are generally a little extended from the orifice of the tubes, and expanded to receive the full influence of the ciliary currents on the blood, which is abundantly distributed to them. The naked and burrowing aquatic annelides have their gills disposed in elegant arborescent tufts, arranged along the exterior and back portion of their body; in some (*Aphrodita*) they take the form of simple branchial sacs confined to the interior, and arranged along the dorsal (*dorsum*, back) aspect. In *Arenicola*, the branchial tufts, filled with red blood, and arranged on either side of the body, are objects of exquisite beauty!

The Myriapoda (many feet,) and insects, are air breathing animals, notwithstanding that many of the latter class are aquatic: the respiratory apparatus consists of tubes, called from their structure *tracheae*, which ramify to every organ of the body, whereby the blood is subject to aeration wherever it flows; these tubes communicate with the external atmosphere by means of openings called *stigmata*, or spiracles, placed on either side of the body.

The great majority of the molluscous classes, are aquatic, and breathe by means of gills, which are very various in their form, structure and situation. From their fixed position, and entire absence of muscular activity, their respiration is exceedingly feeble; to compensate for this condition, the vibratile cilia are produced on their branchiae to an extent that, surface for surface, is probably unparalleled in the animal kingdom. There cannot be a more surprising and interesting sight, than a small portion of the gill of an Oyster, or Mussel, (especially the latter) displays when submitted to the microscope; the cilia are seen vibrating at a rapid rate for many hours: sometimes a tiny fragment of mucous membrane covered with cilia, becomes detached, when it is carried through the water at an equable speed, by the sole action of the vibratile organs, and in this condition might be mistaken for an independent animal. In some of the naked (devoid of a shell) marine slugs, the gills constitute an elegant plumose, or ramose tuft situated on the posterior portion of the back, as seen in *Doris*. The air breathing terrestrial Gastropoda (belly-foot,) the common and well known snails and snails, breathe by large pulmonary sacs, placed on the right side of the body, and defended by a small aperture which opens and shuts periodically to inspire and expire; the interior of this sac is lined with blood vessels comparatively large, and which when injected with size and vermilion form a very beautiful object.

The respiratory organs of fishes, consist of gills; over which fresh volumes of water are being constantly thrown to furnish them with new supplies of oxygen; these organs are various in their form, and are attached to osseous or cartilaginous plates, extending from the sides of the bones of the tongue upwards to the sides of the cranium. The gills consist of numerous small, flat, tapering cartilaginous laminae (plates) closely approximated to each other, bifurcated at their free ends, or cleft to their base, and arranged in a regular series, like the teeth of a comb.

The venous blood of the system is diffused over the very extensive surface presented by the laminae of the gills, by the minute ramifications of the branchial artery. The water which passes in at the mouth, is conveyed backward by an act like swallowing, escapes on each side, and passes over all the vascular laminae of the gills, by which process the blood is brought into immediate contact with the oxygen of the water, and thus it becomes oxygenated and decarbonized.

(To be continued.)

Cultivation of the Corn Crop.

For several years, I have been opposed to deep culture in the tending of corn crops.—The method I practice is as follows:

First, I break the ground as deep as possible, with a stout two-horse team. Then I harrow and pulverize well, and mark out one way—north and south—I prefer leaving the furrows 4 or 4½ feet apart. I run the plow twice in the same furrow. This increases the quantity of fine earth suitable for covering the corn when planted, and enables the plowman to straighten his first furrow, if there have been any crooks in it.

I plant the seeds in such a way as to insure me one stalk at the distance of every foot or eighteen inches in the row, according to the fertility of the soil. I do not plant before the middle or last of May. I never plant till the ground is warm—warm enough to bring the corn up quickly. Particular pains should be taken to plant seed enough, so as to insure a good stand without replanting. Any excess of plants should be thinned out, so soon as it will do to choose good healthy ones to remain.

I commence cultivating with a ninetoot h harrow. The harrow should be long, permitting the teeth to be far apart, so as to tear the ground well and not choke up. If the rows are straight, you may run within one inch of the little corn and keep it clean by stirring, so that no weeds can grow. If the season should be wet, I recommend using the five-hood cultivator, running it through twice, and then to plow thoroughly, being careful, however, not to run so close to the corn as to cut off the roots, so as to stunt the growth of the crop.

After thus plowing, use the cultivator again, and go over the ground often enough to keep the ground perfectly clear of grass or weeds. If the ground is good and the season suits, I prefer running but one furrow with a large shovel plow, in the middle of the row. And I frequently raise as good corn as any of my neighbors, without ever plowing a single furrow after the corn is planted. My idea is that the corn is heavier by not plowing off the roots; and that the land itself is not so much exhausted as it is when laid open to the scorching sun and burning air through the hot season of the year. Consequently, by preventing this exhaustion, I keep my land in good heart, and it produces me a much better crop of wheat than it would if plowed in the old sun-killing fashion.

I have no specified number of times that I go over my corn; it depends on the season, and on the quality and condition of the soil. In common seasons, it should be gone over four or five times.

I provide myself with seed corn, by laying aside selected ears when husking my corn.—And I prefer always to soak my seed corn twelve hours in a steep, prepared by dissolving one-fourth of a pound of copperas and a quarter of a pound of saltpetre in hot water. This steep is poured on to a bushel of the seed corn boiling hot; the corn being then covered with a piece of thick cloth placed over the tub. This is done in the evening.—In the morning the water is turned off, and the seed corn is ready to plant. If it should be rainy, the seed should be placed in a bag, and kept near the fire—wetting the outside of the bag occasionally, to prevent the seed corn becoming too dry.

The effect of this steep is to cause the corn to start growing immediately, and also to prevent birds preying upon it.

By pursuing the above plan of culture, my corn is generally heavy. And on new ground I have frequently gathered 75 to 80 bushels to the acre.

This plan is not the one generally pursued by the farmers in the counties of Rush and Shelby. Many farmers use the single narrow steel shovel plow, putting it in deep and running it close up to the rows, going over the field about once a week and some five times during the season. The objections I have to this plan consist in its disturbing too much the rootlets of the corn by this deep plowing, and on account of its leaving some of the ground undisturbed in the middle, which frequently becomes filled up with grass.

The use of the double shovel plow is now practiced to a considerable extent, which obviates the last objection; as going through twice to each middle stirs the entire ground from row to row. Neither does the double shovel plow go in so deep as the single shovel and consequently the roots of the corn do not become so much injured. Sometimes in a wet season, I find it necessary myself to use the plow in place of the cultivator, in order to destroy the grass and weeds. If I find myself under the necessity of using the plow, I prefer using a large shovel plow, running it once in the centre of each middle, and after three or four days following it with the five-hood cultivator again.—H. B. CLARK, in Ohio Valley Farmer.

Breeding Ewes and Lambs.

FROM THE OHIO FARMER.

1. BROODS AND EWES.—The success of the wool-grower depends more upon the quality and management of the breeding ewes, than any other portion of the flock; hence, the good shepherd will give particular attention to this department. As a matter of the first importance, a buck should be procured possessing all the qualifications requisite to a perfect sheep; for without a good sire, it is useless to attempt to produce valuable animals.

It is customary with most of our wool-growers, to turn out their bucks with their ewes, and let them run with the flock during the entire breeding season, with no other attention than a feed of grain once a day. This is not the practice of the successful breeder; go to our best flock masters, and they will tell you that this is not good management. The course pursued by our best breeders at the present day, is to select nothing but the choicest ewes to breed from, which should always be in good condition when put with the buck. They should be brought to the sheep-fold every day, and instead of putting the buck with them that is designed to serve them, a well aproned teaser should be put with the flock, that will readily find all the ewes ready for service, and as fast as they are found, the shepherd should put them in a pen by themselves, and as soon as he is satisfied he has thrown them all out, the balance of the flock should be taken away.

The buck designed for service should have a pen in a convenient place, not less than six feet square, and the ewes to be served should be put with him, one at a time, and allowed one connection only, and the time between services should be divided by the number to be served during the day. Bucks managed in this way will answer for two or three times as many ewes, as when allowed to run constantly with the flock, and the lambs will be better and stronger; and if the number of sheep served is large, there will be a greater proportion of ewe lambs, which is a matter of considerable importance to the wool-grower. The idea of influencing the sex of the offspring by any course of management, may appear nonsensical; but I have tried it to my satisfaction, and fully believe that a buck used to a large number of ewes, and allowed but one connection, will beget more female than male offspring. At the present time, April 12th, I have about one hundred lambs, none of which are over two weeks old; the ewes all served as recommended above, and the result is two-thirds or three-fourths are ewe lambs.

2. CARE OF SPRING LAMBS.—The success in raising lambs depends mainly upon the condition of the ewes at lambing-time. After the tupping season is over, the breeding ewes may receive the attention as other portions of the flock, until a few weeks previous to the time for yearning their lambs, when they should be more liberally fed, with the best of hay, and a daily allowance of grain, with occasionally a few roots, to insure a good flow of milk. Roots fed in large quantities previous to lambing, produce weakness in the lambs; hence breeding ewes should not have them constantly until after they have dropped their lambs, when they may receive a liberal supply. The best clover hay should be reserved for the suckling ewes, as this is indispensable if the lambs drop before there is a fresh bite of grass. Early cut and well cured clover hay will produce more, and better milk, than any other hay, and I would sooner dispense with roots and grain, than to do without the clover. Wheat bran and oil-meal is also good feed for suckling ewes. Hay that has been damaged in any way will produce unwholesome milk; and if suckling ewes are fed upon such, to any considerable extent, it is almost certain death to young lambs. Previous to lambing time, every shepherd should provide a suitable number of small pens, (say not less than ten to every hundred ewes,) for the accommodation of one sheep and lamb; and between every two pens there should be a good feeding-box, to prevent the waste of feed. The size of the pens should be two and a half by three feet, or three feet square; and a very good plan for building them, is to build them on one, or both sides of a common box-rack. In the latter case, all that is necessary is to drive some stakes into the ground, three feet from the rack, and nail on two boards; then cut some, refuse boards three feet long, and nail them together for the partitions; these slightly tacked to the rack and former boards, and the pens are done; and if laid up after you have done using them, they will last a number of years. Besides the small pens, there should be two or three of larger dimensions, suitable for the accommodation of two sheep.

In almost every flock there are some ewes that lose their lambs, and as the merinos are not great milkers, as a breed, there will be others, that are very poor milkers, and scarcely able to raise a lamb at all; or if it lives, it is a sickly, worthless thing. My plan is, when cases of this kind occur, to put the two, sheep and lamb, into a pen together, and

compel the ewe that has lost her lamb to suckle the other, and in a short time, she will take to it as though it was her own. I have often had them own a strange lamb in less than twenty-four hours; but sometimes they are obstinate, and will rebel for a week or so, but will finally come to, and the step-mother will take the best of care of her adopted lamb. Lambs should never be permitted to remain with the flock, as there is great danger of their being trampled upon by the other sheep. To prevent this, the mother and lamb should be taken at once, and put into one of the small pens, prepared for the purpose, and there remain until the lamb sucks well, and is strong and able to be removed to an apartment designed for sheep and lambs. As fast as the lambs get strong, they should be taken from the pens and placed with the latter flock, to make room for the new-born lambs. When sheep are in good flesh, and managed in this way, there is never any trouble about sheep not owning their lambs; but if compelled to remain with the flock, they will often get confused and disown their own lambs, or sometimes take to other lambs, or the older ones will steal milk from the young. Sheep, when they first lamb, will often take to any one that comes in their way, if their own lamb happens to crawl out of their sight, as they often will by getting behind, or under a rack. Cases of the latter kind are not unfrequent, which gives the shepherd no small amount of trouble. The shepherd should watch the young lambs, and see that they all suck. There is not much trouble of this sort when the sheep and lambs are put into the pens, but there are occasionally instances where the lambs will not find the teat, in which case it will be necessary to assist them a few times.

After lambs are two or three weeks old, they require something more than the milk of the ewe to make them thrifty. When they can get a good bite of grass, that is all that is necessary; but when they are dropped before the sheep get out to pasture, they should be separated from the ewes at least once a day, and have clover hay, oats, and roots, (the latter cut fine,) all placed within their reach, and they will soon learn to eat. If there is plenty of room, they can have a pen by themselves, but if not, they can be fed in the same racks with the sheep. To sort them, open the door and stand partially in it; let the old sheep run out and keep back the lambs; practice this way a few times, and the sheep will all run out and the lambs stay back. Then feed the lambs, and let them have an hour or two by themselves; they will soon begin to nibble the clover heads, and eat the oats and roots. After they have eaten all they will, let in the sheep to eat up the leavings. At first there will be considerable bleating, but in a few days all will be quiet, and both the sheep and lambs will do better than when allowed to run together all the time.

GEO. CAMPBELL.

West Westminster, Vermont, April 12, 1859.

Trowbridge Collection of the University.

[We copy from the Detroit Free Press of the 29th ult., the following remarks of Prof. Winchell, relative to the Zoological specimens donated to the University of Michigan by Lieut. Trowbridge:]

"Frequent mention having been made in the public prints of a collection of zoological specimens conditionally donated to the University of Michigan by Lieutenant (late Professor) Trowbridge, the undersigned have thought that a brief statement of the nature, extent and value of this collection, which is now received, might prove acceptable information to the public.

Lieutenant W. P. Trowbridge, while occupied, some years since, as an officer of the Coast Survey, in California and the Territories of Oregon and Washington, was induced by his interest in the natural history of our country, as well as by the desire of the Smithsonian Institution, to devote a considerable degree of attention to the collection of specimens illustrative of the Fauna of the Pacific coast. To this work he not only devoted his own leisure, but actually employed collectors at his private expense to augment the stores which he felt ambitious to return to the naturalists of the East. His attention was directed to every class and order of the animal kingdom. When the collection arrived at the Smithsonian Institution, they were pronounced the most valuable contribution received from the Pacific coast up to that time. This was before the organization of the Pacific Railroad explorations, and consequently nearly every specimen possessed a value quite unique. The new species thus brought to the knowledge of science were numbered by hundreds. The naturalists at Washington were delighted with these results, of which, but for Lieut. Trowbridge's energy, they might have been deprived for many years.—The gratification of the Smithsonian Institution was expressed by the offer to Lieutenant Trowbridge of a complete and carefully la-

beled suite of his specimens, to be deposited in such public institution as he might designate. To a selection from his own collections, the Smithsonian offered to add extensively from other collections, made in other parts of the continent; so that the whole, when together, would constitute an important illustration of the Fauna of North America.

Lieut. Trowbridge at once formed the purpose of offering this collection to the University of his native State. By a happy coincidence he was called shortly afterwards to occupy the chair of a professor in the institution for which he had already destined his specimens. In the very letter accepting this appointment, he made a formal tender to the University of this zoological collection.

It was left to the present Board of Regents to acquire the credit of carrying out the donor's purposes. More than a year ago an appropriation was made for effecting such alterations in one of the college buildings as should fit it for the reception of the Trowbridge collection, and, at the same time, afford adequate and permanent accommodation for the entire University Museum. In pursuance of this provision, an entire gallery in the fourth story is devoted to Zoology. Such are the architectural arrangements of the gallery, and the plans of the cases, that the University is provided here with unequalled advantages for the exhibition of zoological specimens. The cases, though not completed, are sufficiently so for the reception of the Trowbridge collection, which has just been provisionally arranged upon the shelves. A catalogue of the whole will be published at an early day.

The collection, as far as received, consists of the following objects:

	Genera.	Species.
North American Mammals.....	28	66
North American Birds.....	240	240
North American Bird's Eggs.....	102	88
North American Reptiles (including Batrachians).....	78	165
North American Fishes.....	74	95
Exotic Mammals.....	5	8
Exotic Birds.....	7	10
Exotic Reptiles.....	8	14
Coleoptera (Beetles).....	58	111
Orthoptera (Grasshoppers, &c.).....	19	26
Neuroptera (Dragon Flies, &c.).....	16	36
Lepidoptera (Butterflies, &c.).....	28	47
Hemiptera (Squash Bugs, &c.).....	51	65
Homoptera (Tree Hoppers, &c.).....	13	36
Diptera (Flies, &c.).....	63	99
Myriapoda (Centipedes).....	1	4
Arachnida (Spiders, &c.).....	3	1
Crustacea.....	46	64
Mollusca.....	19	39
Total.....	695	1,204

The following remarks are important in relation to the Trowbridge collection:

1. It frequently contains several specimens of the same species from different localities, thus illustrating geographical distribution, and, in many instances, local variations in the specific characters.

2. The collection does not generally contain common species, excepts among reptiles and insects. The specimens are rare and unique. This is its great feature, and gives it a value to the zoologist which is almost incalculable. The common species of the settled portions of our country can be easily added.

3. A large proportion of all the specimens are types upon which descriptions have been based in standard scientific works. The vertebrates have all passed through the Smithsonian Institution and bear its registered number. These identical specimens will be found mentioned in the volumes by Prof. Baird on the mammals and birds of North America, (VIIth and IXth vols. P. R. R. Surveys,) and in other scientific works. Every specimen is accordingly labeled by the highest scientific authority.

4. The series of reptiles is remarkably complete, but very few North American species known to science being omitted.

5. The collection is still to be increased.—In the letter transmitting these specimens, Prof. Henry announces the purpose of the Smithsonian Institution to continue to make additions, as other orders are worked up by the naturalists at Washington. We may thus expect large additions to all the classes. Other naturalists have likewise proposed to contribute in the future, as they have already done, such specimens as can be spared from their stores of duplicates.

6. The collection at present is select, rather than bulky or showy. Its value as already indicated, is not to be estimated from its bulk or the number of curiosities which it may contain. No money could purchase another such series of specimens, nor could they be obtained, except through the Smithsonian Institution, at least for a long time to come.

7. This collection, in conjunction with the specimens already accumulated at the University, renders its Zoological Museum the most valuable in the West, and gives it rank among the first in North America.

8. The condition upon which future accessions from the Smithsonian Institution are made to depend is a liberal and appreciative disposition on the part of the University.—It has been the desire of the Smithsonian Institution to constitute a centre of zoological

science in the Northwest, and to assign to such location a liberal share of duplicate specimens as fast as the several orders shall have been worked out. The movement of Lieut. Trowbridge, and the liberal spirit manifested by the present Board of Regents, have induced the management of the Institution to believe that Ann Arbor will prove itself the most eligible point at which to commence carrying into execution their designs in the establishment of a few local centres.

9. It is greatly to be desired that the liberality of Prof. Trowbridge, and the generosity of the Smithsonian Institution, may not only awaken an interest on the part of the officers of the University, but may stimulate other private citizens to contribute, as they may be able, to the furtherance of the great object, which is calculated to give the University of Michigan a pre-eminence among the colleges of the land, and to shed a lustre upon the name of the State.

A. WINCHELL,

Prof. Nat. Hist. in the University.

R. KENNICOTT,

Agent of the Parties in Selecting, Packing and Delivering the Specimens.

MICHIGAN STOCK REGISTER.

SWINE.

Essex Pigs on the Agricultural College Farm.

The College Farm possesses, and will soon be able to supply as pure blood Essex pigs, as can probably be found in America. A boar and sow were selected from the best stock exhibited at the State Fairs respectively of Michigan and New York, in 1858, by Mr. Williams, late President of the College. The following are their pedigrees, furnished by him at our request:—

SNOW BALL. Boar.

Sire, Hanno; 1 g. sire, Colchester; 2 g. sire, Fisher Hobbs, imported in 1838.

Dam, Jessie; 1 g. dam, Venus; 2 g. dam, Iahmich. Snow Ball, was purchased of J. S. Tibbitts, of Plymouth, Mich., and bred directly from the stock as above named, imported in 1853 by L. G. Morris, Esq., of Mount Fordham, N. Y. He was dropped April 18, 1858.

CLEOPATRA. Sow.

Sire, Chalmersford, imported by S. Thorne, Esq., Thorndale, Washington Hollow, N. Y. He took the First prize at the Royal Agricultural Show at Chelmsford, Eng., in 1856. He cost in England \$250.

Dam, She was from stock imported by Mr. Morris in 1850, which stock was crossed by Uncle Tom belonging to Mr. Brewer of Staten Island. Uncle Tom was of imported English Stock purchased of Lord Western.

Cleopatra was purchased of C. S. Wainwright, Esq., of the Meadows, Rhinebeck, N. Y. She was dropped June 2, 1857. She has now a litter of pigs, dropped March 27th, 1859, (two boar pigs, and four sow pigs) by Brum, a boar imported by Mr. Wainwright, he being the best pig in a pen of five, which took the first prize, at the Midland Counties Show at Birmingham, England, in 1856.

The Boar from the stock of Mr. Tibbitts, a breeder in our own State, in the symmetry of his proportions, is equal if not superior to the sow and her progeny, brought from a greater distance. The sow, however, exhibits evidences of rather superior vitality. They all show unmistakable evidences of purity of blood, in their beauty, docility, and perfect organization.

FARM MISCELLANEA.

Hay Seed for Hogs.

"C." Chester county, Pa., in the Country Gentleman, writes: "In addition to a suitable amount of ground grain given in slop, they should have their daily allowance of green clover or grass; or when these are not available, as in winter, a liberal allowance of hay seed from the barn mixed with their slop, either of which they will eat with avidity and at the same time that they derive as much nourishment from this as they could by grazing on a fresh clover field, the conditions requisite to general health are secured; and from any observations I have been able to make, I know of no method by which so great an amount of growth and weight can be induced with equal cost of food in the winter season as by this haying system.

A New Enemy in the Barley.

Professor Fitch, of New York, in a late number of the Journal of the New York Agricultural Society, describes three separate insects which are particular enemies of the barley plant, and which lay their eggs in the stalk and thus become a kind of joint worm, that cuts off the crop, or at least in many places damages it very much. Scientifically, these flies are referred to the genus *Pteromalus*, family *Chalcididae*, order *Hymenoptera*. After an examination he refers each of the kinds to different species, and names them in English as: 1. The Black Legged Barley Fly; 2. The Joint-worm Fly; 3. The Yellow Legged Barley Fly.

The Chili Potato.

This is a variety that is mentioned as proving very prolific in Pennsylvania, and also an excellent kind for cooking.

Feeding Flax Seed.

One of the ways in which flax seed has been used by myself and a few neighbors, is by mixing it with oats for horses, say about half a pint in an ordinary feed. This practice answers the purpose for which it was at first intended, namely, to make the skin soft, and the hair glossy, and the bowels sufficiently free. Even when flax seed costs \$1.50 and \$1.75 per bushel, and oats but 25 cents, it is considered good policy to practice this method of feeding.—A. R. A., in Country Gent.

The Garden & Orchard.

Transactions of the American Pomological Society.

REPORT OF THE STANDING FRUIT COMMITTEE FOR MICHIGAN.

NUMBER TWO.

The report recommends the following, as the best for a family orchard of one hundred trees, embracing twelve varieties:

Early Harvest.....	6 Belmont.....	10
Amer. Sum. Pearmain.....	6 Ladies' Sweeting.....	6
Late Strawberry.....	6 Yellow Belflower.....	20
Gravenstein.....	8 Swart.....	6
Fall Pippin.....	6 Esopus Spitzenburg.....	12
Rambo.....	6 Northern Spy.....	8

With the list of six varieties only, it was necessary to select with reference to productiveness or profit, rather than quality, but with the present more extended list, some of the finer amateur varieties might be admitted, in quantities sufficient for home use, as well as a few kinds especially adapted to culinary purposes.

It will also be observed that most families who do not make fruit-growing a special or principal business, will find themselves fully employed during the summer and fall, and will, therefore, prefer to have barely a home supply of the earlier varieties, with the surplus of winter sorts, when they have more leisure to attend to them. Bringing the above list to this test, we observe that the number of trees of Early Harvest, when fully in bearing, will more than doubly suffice for the use of a single family, leaving the produce of three or four trees to be wasted, unless marketed during the hurry of haying or harvesting.

It will also be found that the American Summer Pearmain, which is next on the list, does not mature in season to follow the Early Harvest, leaving a vacancy, which should be filled by some such variety as Red Astrachan, Early Joe, Early Strawberry, or Duchess of Oldenburg; to admit which, the Late Strawberry might be omitted, as it covers nearly the same season as Gravenstein, which is a preferable variety.

The list gives twenty six trees, the fruit of which will have passed out of season by the first of October, or very soon thereafter, which, allowing the trees to produce but five bushels each, would yield a total of one hundred and thirty bushels, for the consumption of a single family during a little more than two months; and that, also, during the season in which a large variety of other and more luscious fruits are in their prime.

It will also be observed, that prior to the Fall Pippin, there is no fruit on the list at all adapted to culinary purposes, if we except Early Harvest, the remaining three being properly dessert fruits. This omission might be supplied by inserting Keswick Codlin, or Hawthornden, the former, especially, being admirably adapted to this purpose, cooking admirably even when but half grown, and continuing till October.

Fall Pippin is said to be unproductive in some parts of the West, and the same objection was made to it by the Fruit Growers of western New York, at their session last winter; but it is believed to be eminently profitable throughout the greater portion of this State, and in view of the fact that it comes into use about the last of September in our climate, and usually keeps well till February or March, its number might well be increased at the expense of those preceding it.

Rambo, which is next on the list, is only recommended from Ohio and Pennsylvania, which would seem to indicate some deficiency in the elements of popularity. With us it has a habit of bearing enormous crops in alternate years, from which cause the fruit becomes small, and the trees are often broken by the burden. This may be prevented by thinning the crop, but in practice, this is seldom attended to; and if we recollect that the preceding variety covers the same season, its introduction here may be considered as of doubtful propriety.

Belmont was fully discussed in the preceding article. If it is not more successful in other portions of the State than it seems to be here, the expediency of introducing it into the list is more than doubtful, unless its great beauty and exceedingly agreeable flavor should induce the planting of a tree or two, strictly for home uses.

Ladies' Sweeting appears to be, comparatively, little known in most portions of the State, but it will probably prove worthy of the place it occupies. The only question will be whether it is capable of assuming the place of the time honored Talman Sweet, for winter baking.

Yellow Belflower, where it is successful, is one of the first of winter cooking apples, but as it is not popular in the market, it would, perhaps, be better to substitute for it Rhode Island Greening, reserving only enough for home use.

Swaar is another of the very finest fruits, and also a very superior keeper, but which, in the hands of ordinary cultivators, will hardly prove desirable beyond the wants of the family, as it is obstinately over-productive, and consequently the fruit soon becomes small and scabby, unless under the most liberal and enlightened treatment. Notwithstanding these drawbacks, however, its qualities are so decidedly superior, that an orchard can hardly be said to be complete without it.

Esopus Spitzenburg is liable to but a single objection; which is that it is unprofitable, as compared with several other varieties. It has, however, so many superior qualities, that it can hardly be spared from the list, although a reduction of the number might be desirable.

Northern Spy is the last upon the list, and its right to be there at all, is in the estimation of the writer, more than questionable. The fruit growers of its native region (western New York), are by no means satisfied with it, and, as it is a very tardy bearer, its reputation is yet but partially established in this State.—Although it has, occasionally, borne fine crops here, these have so far been the exception, rather than the rule, while the variety already displays a decided tendency to produce scabby and imperfect fruit. Indeed, it may be considered as already settled, that, if successful here, it must be under the best of treatment, or with the most favorable local circumstances.

In reviewing this list, we observe the same difficulty that was observed against the preceding one, viz: that, with the exception of Ladies' Sweeting, it cannot be relied upon to produce a supply of fruit much beyond the month of March—a serious objection; as during no part of the year is the lack of fruit so difficult to supply, as during the spring and early summer. In order, therefore, to provide for this lack, it might be well to omit such varieties as can be most conveniently spared, and add some of the longest keepers, which can be relied on to furnish a supply till the summer fruits are again in season.

For this purpose Roxbury Russet will prove desirable, as a culinary variety, and a tolerable dessert fruit, if kept in tight vessels to prevent shriveling; and Red Canada, (Steel's Red Winter, of Wayne county,) will be found one of the most popular and profitable market and dessert fruits for this State. It is a very slender grower, and should, on that account, be always top-grafted. It bears, alternately, heavy and light crops, seldom failing entirely. The fruit is of fine size and great beauty, almost always fair, with an exceedingly pleasant, aromatic flavor; and, although it cannot be called rich, it will perhaps suit more palates than almost any other fruit of its season. It never shrivels, and will keep, in a good cellar, till June or July—a season of the year when fruits always command an exorbitant price.

T. T. LYON.

Plymouth, April, 27th, 1859.

Uses of Lime in Gardening.

Of all the mineral and earthy substances employed in agriculture and gardening, there is no one, probably, about which there exists, in the minds of most persons, more doubt and uncertainty as to its real value and action, than in respect to the simple article *Lime*.—Some farmers and gardeners think very highly of it, and use it constantly; others use it rarely, or discard it altogether. The most elaborate papers on the uses of Lime, (such as that in Johnston's Chemistry, for instance,) fail to enlighten the most intelligent readers as to the true nature and action of it upon soils and plants; and the most contradictory statements are constantly being published, in Agricultural journals, as to the practical effects of liming land.

The truth is, that while some of the most important uses of lime are overlooked, too much is expected of it, by many who employ it. Farmers and gardeners are nearly all apt to look too much to one substance as a fertilizer. One thinks he can do everything with lime; another bases all his hopes of success on plaster; a third will have nothing but rotted sod, while a fourth thinks a grand panacea is to be found in guano. No error is more fatal to success than the one-idea notion. Lime is a very important auxiliary to other manures. It is in more ways than one a real fertilizer, and it produces, sets free and organizes fertilizing qualities in other matters; but it is by no means a universal manure or fertilizer.

To make a long story short, I propose to set down, in a series of paragraphs, the most evident and important uses of lime in gardening, and to call attention especially to two actions which it possesses, which are not very generally recognized or understood.

1. Lime is an alkaline earth, (a sort of salt,) and its first and most evident use is to sweeten sour soils.

2. Lime furnishes a substance which is present

in considerable quantities in the ash of nearly all our cultivated plants and fruits.—For this reason, partly, lime is specially useful to potatoes. The tuber of the potato shows but a trace of lime in a ton, and hence, some writers have hastily concluded, that lime, in quantity, is not essential to this crop. But look at the analysis of the straw or tops: there you will find nearly three hundred pounds in the product of an acre.

3. Freshly slacked, or caustic lime, acts as a powerful decomposing agent, when in contact with masses of earth or vegetable matter, setting free many substances which before existed in forms insoluble in water, and causing the natural decay of organic bodies to be hastened.

4. Lime causes cold, dense soils, to become more open and porous, renders light sandy soils more close in texture, or more adhesive. These last are facts very generally understood.

5. Vegetable matter (that is, loam, soda, stable manure and straw) is the food of lime. By its decomposing power it may almost literally be said to eat up vegetable matter and manure out of the soil, when in the caustic state. Hence, where there is little loam, there lime should be used sparingly.

6. Not only does lime decompose vegetable matter, but when used in excess it renders the results of decomposition insoluble in water.—This is an important point. We have not space to elucidate it. But we state the fact, that lime not only decomposes, and renders soluble vegetable matter, but in excess, it renders the results of decomposition insoluble.

7. Lime, in close proximity with decaying nitrogenous matters in the soil, (as horse manure, hair, leather, etc.) becomes a real ammonia-producing agent; as it is a well-known fact, that lime and nitrogen, under such circumstances, unite to form nitrate of lime, fully equal to ammonia as a fertilizing agent, while potash and nitrogen form nitrate of potash, (salt petre,) the money value of which as a manure, needs no explanation.

8. Lime, when it has been burned and slacked, and again becomes mild, (or is changed into the form of carbonate,) is then a store-house of carbonic acid for the use of plants, and in a certain degree, has the same action upon vegetation as carbonic acid evolved from decaying vegetable matter.—You will ask, how is this carbonic acid set free? I answer, in one instance, by the action of carbonate of lime upon silica or sand (which is chiefly an acid,) silica acid is liberated, which in its turn acts upon the carbonate of lime, and large quantities of carbonic acid are set loose. Other changes, of a similar character, take place in the soil, caused by the actions and reactions of acids and alkalis, which result in the liberation of carbonic acid, held in combination by lime, and thus it serves, in a measure, the same purpose as vegetable carbon, in its relation to plants.

The last two sections (7 and 8), are those to which I wish to direct the attention of the reader, as they describe the least known and most important uses of lime.

My rule is to use lime, in the garden, constantly, but moderately; and especially to use it in combination with hair, leather and any slowly rotting nitrogenous matters;—and thus I secure two or three important points in "terre culture"—Wm. Bright, in *Gardener's Monthly*.

HORTICULTURAL NOTES.

The Fruit Crop—Cold Term of the 17th and 18th of April.

In order to keep your city readers posted in regard to the present condition of the fruit crop, I send you still another bulletin, giving an account of the action of the frost on the night of the 17th inst. The degree of cold was not quite so great as that accompanying some of the other frosts which have occurred since the fruit first bloomed out, but the season of growth has been advancing and the susceptibility to harm from the action of frost has been thereby augmented.

Since the night of the frost I have conversed with quite a number of cultivators and think the following deductions safe. The apple crop is not materially injured. Pears are a good deal worsted; but on good sized trees, favorably located, many varieties will make a crop. Cherries—unless they drop from being chilled—will make a crop. Plums survive in some places. Peaches are seriously affected, but, according to present appearances, there will be great abundance in favorable positions, with chances for a scattering crop wherever the frost the 5th and 6th of April did not destroy the whole bloom. Strawberries are now coming into bloom, and, by way of testing the cold to which the blossoms were exposed, I suspended one thermometer one inch above the surface of the ground and away from trees. The experiment shows that plants hugging the ground experience an amount of cold greater by several degrees than the branches of trees of very moderate height.—That portion of the strawberry crop in blossom was of course killed, but for all that the crop of the season may reach an average.—L. Young, in *Louisville Journal*.

Fruit in the Vicinity of Cincinnati.
Everybody who feels the privations of last year's failure of the fruit crop, is uneasy and anxiously enquiring about the safety of the fruit at this time. On quite a thorough examination in the most exposed situations, this morning, I find the peach is considerably harmed in these localities; but the cherry, plum, pear, and apple, never offered better evidence of an abundant crop. And I think we may feel that the Rubicon is crossed in safety.—The season has been peculiar and calculated to produce much anxiety, an open winter, with vegetation in a condition to be easily excited into action, while it was some two weeks in advance of

our usual spring. It was most fortunate that it was accompanied with the rare cold storms we have experienced, which kept vegetation in check, and hardened it so as to resist the chilling blast. Had our early spring been accompanied with its usual mildness, we should probably be in the same situation as last year.—A. H. Emsw, in *Cincinnati Gazette*.

The Twelve Select New Varieties of the Pelargonium.

A writer in an English journal gives the following as twelve select new varieties of that charming plant, the Pelargonium:

Fellowes's Ariel, The Bride, Blink Bonny, Foster's Brilliant, scarlet and the best of its class; Fire Queen, Lady Canning, Leviathan, Mrs. Ellice, Prince of Wales, Spotted Pet, Ringleader, Peacock. These varieties are scarce as yet, and plants are held at a guinea apiece (five dollars).

The Diana Grape.

Dr. Farley of Union Springs, a somewhat well known cultivist of the grape, places the Diana at the head of the list for delicious quality, and it is also remarkable as being a very production variety.

Saving Bulbs and Roots.

M. of Champlain, N. Y., writes "that the best way to keep Dahlia, Gladiolus, and other tuberous and bulbous flower roots, is to tie them with strong twine in small bunches, and hang them to the beams of the cellar, far enough apart so that the bunches do not touch each other. Of course each should be carefully labelled. This method we have practised for several years and not lost a tuber during the time.—Country Gent.

Onion Culture.

A gentleman who has lived the last thirty years in the midst of fields of onions, where more than one hundred thousand barrels of best quality are annually gathered, says:

"Spare no pains in preparing the soil, pulverizing and fertilizing it well, and clearing the surface of all extraneous matter, so that the seed may be evenly distributed—in rows, about fourteen inches apart, and thick enough in the row to admit of the young plants being thinned, so as to leave them growing about two inches apart. No harm will accrue from their being thus thick;—this will enable them to grow two inches in diameter, and when they grow larger than this, they are coarse and not so palatable.

"No crop better rewards care in culture than the onion. It has an extreme aversion to weeds, and everything else that disturbs the tender fibres of the young plant. Although the bulb forms chiefly on the surface, these fibres extend to the depth of ten or twelve inches, and the soil should be in condition to favor this extension. Otherwise, when drouth comes on, the growing plants will feel it; and once checked in their growth, from this or any other cause, they never again fully recover."

Fruit in Ohio.

The Ohio Farmer thus notes the fruit prospects in that State: The recent frosts have not injured the fruit blossoms to any great extent, if at all, along the lake shore. We have examined the peaches, cherries and apples; all look well, and promise an abundant crop. Blossoms are more numerous than usual, on all fruit trees.—Apricots have set, but the curculio will thin them out. Plums are now in bloom and promise well; subject to the ravages of the little Turk already named. Pears look well, but are liable to injury from chills, and the effect is not apparent until they have set, when they drop off. Still we think there will be an abundant crop throughout Northern Ohio. South there has been considerable injury from the severe frosts of this month.

Watering Garden Plants.

As introductory to considering the best time to water garden plants, it may be appropriate to allude to the purposes sought to be effected thereby, that it may be seen at what time the means resorted to are probably the most effective in promoting the objects in view, or results desired.

Watering, then, may be considered as substitutive raining, and as rain furnishes the medium by means of which far the largest proportion of the nourishment of plants is supplied to them, through their leaves, it follows that the best method of watering must most closely approximate such form of rain as is most refreshing and useful, namely, steady rain in small globules, when the air is at a sufficiently high temperature. The air is of necessity warm after a long drouth, and plants need watering; and the same heat that causes the drouth reduces a large amount of surface mould, so near the assimilable form of plant food, as taken in or absorbed by the leaves, that a supply of sufficient water is all that is requisite to facilitate combinations with such ultimate particles, and carry them to the receiving pores in the pendent leaves above. It is therefore of much importance that plants should be so watered in such manner as not only to be refreshed by its contact with their leaves as well as roots, but also that it be distributed in as fine jets as possible, and over a considerable surface of ground, so that it may combine with the prepared mould—prepared by the same chemical influence of heat that induces drouth—awaiting its coming, and much of which will be carried up by the essential means of evaporation thus supplied, to invigorate the plant by these combined elements equally essential to life and growth.

Much the largest proportion of their bulk being derived by plants through the agency of evaporation, the largest proportion of water artificially supplied, should be distributed therefore, so as to admit of the combination

and carrying up of so much prepared mold, or organic matter as possible, in the vapors that ascend first thereafter.

The time of watering plants should be between the setting and rising of the sun, so as to admit of the fluid saturating and combining with the impalpable mold powder before the rays of the sun penetrate and dissipate it in water alone; for it must ascend when charged with heat, whether fully or only partially combined with the organic particles for which the leaves are yearning, equally as for water itself. It is evident that when water is supplied while the solar rays radiate in force, much of it must be immediately evaporated, before it can have entered into combination with organic material, and which will not, therefore, have fulfilled a moiety of the functions its capacity admitted of, because sufficient time was not afforded for its most beneficial effects. Hence, watering some time before the sun shines on the watered surface, economizes water by allowing time for its more certain combination, rendering a given quantity much more effective in promoting plant growth, than could possibly be the case when evaporation of it commences even during its application, and before new plant food can be formed.

The roots are sure to get their full quota, but as the leaves must have vapor laden with nutriment, it would appear that the antiquated custom of watering at night-fall, is neither a superstition or a practice without reason, for the same vapor that refreshes and invigorates while conveying the elements that go to form the fabric of the plant, simultaneously enters therewith into the substance and formation of its structure. Here, then, the theory and experience concur—as they always do if correct—in determining that night-fall is the time of supplying water, to secure its most economical results.—J. W. C., in *Co. Gent*.

Summer Management of the Grape Vine.

To get shoots where we want them, and as we want them, is the only object of summer pruning grape vines. Many other kinds of fruit trees, if they grow freely and vigorously, will bear fruit. The wood-producing and the fruit bearing principles seem antagonistic; and summer pruning such free-growing trees, by weakening the wood-producing power of the tree, throws it sooner into bearing. But it is not so with the grape vine. The stronger and the healthier the wood can be grown this season, the finer will be the fruit the season following.

We are ranked amongst "the meekest, mildest mannered men," but how it angers us at times to pass a vigorous healthy vine in July, and to see some ugly, bifurcated animal, in pants and shirt sleeves, tearing away at the young leaves and shoots of the plant without the shadow of a reason, with all the ardor of a delightful pastime, and till scarcely any foliage is left on the vine. *Ain't I admitting the sun and air freely through the plant in order to ripen its fruit! Without reason? Eh! Softly, my misguided friend.* It is not merely the sun and air that ripens your fruit. It is the office of the leaves to do that; and the finer and healthier the leaves of your vine, and the greater the amount of these healthy and vigorous leafy appendages, the better will your fruit ripen, and the finer will it be in all respects. Have you never noticed how a vine rejoices when it can steal among the branches of a lofty tree far out of the reach of your exfoliating fingers? Did you never see how some uncared for specimen, which never in its infancy had the advantage of an "expert" to care for it, and recommend some "warm and sunny" spot as the very place for its future welfare; did you never see how in that neglected shady spot, where the mid-day sun in vain could penetrate, and the life-giving rays of the morning sun broke in only in winter,—where

"Plants at whose name the verse seems loath,
Filled the place with a monstrous overgrowth,
All berried, and pulpy, and blistery, and blue,
And livid and star'd, with a lurid hue,
Where agaries, and fungi, and mildew, and mould
Started like mist from the damp ground, cold;"

and yet where the plant seemed to revel in perpetual healthfulness, the fruit to color to perfection, and the canes to live to a fabulous age and to attain to quite marvellous dimensions. And all this, not because of the shade per se, but because the thrip, and spider, and the myriads of insects that love to bask in the summer's sun; and the mildew, or blight, or oidium, or whatever you call it, that loves to spread itself where drouth and moisture in the air, or extremes of heat and cold rapidly alternate, do not find a foothold.

The leaves—the leaves take care of the leaves. Never remove for any other purpose than to weaken a strong-growing shoot. So shall your vine luxuriate and bear fruit, and afford you a grateful shade, free from most of the ill the grape vine is heir to; and if in its nature a spark of consciousness exist, that atom of mind will expand with a fervid warmth of gratitude to the writer of this article for saving it from the barbarous treatment it may have been heretofore subjected to.—*Gardener's Monthly*.

FOREIGN AGRICULTURE.

Varieties of Cattle Food.

FROM THE LONDON FARMER'S MAGAZINE.

If the Englishman of the present day is better fed than his ancestors, or than the native of any other country, the same improvement is also extended to his domestic stock: for the wisdom and economy of good nutritious food for laying on fat and flesh are now thoroughly understood. Our cattle and horse kind are not left, as in some countries, to collect a scanty provender from rank steppes, savannas, or prairies; to munch upon the sprouts or twigs of trees, or to luxuriate upon rank sea weed or fish upon the sea-coast. The best pastures of natural and artificial grasses are prepared for their special behoof, hay is laid up for their winter store, green crops and pulse are cultivated to a large extent, and the choicest oleaginous food, meals, and various delicacies to gladden their palates, are imported to a large extent, while the best of shelter is also provided for them. We boil and steam their vegetables and roots, and treat them as kindly as our own children. Chemistry is brought to bear upon the analysis of the substances to be tried as cattle-food, and those only selected for general adoption which are found to be most nutritious and fattening; while various experimentalists strive from time to time, to make food compounds for extensive use, which shall combine fattening qualities with portability. As no other country pays so much attention to the improvement of breeding and fattening cattle for the market, so no country has experimentally made more on the nature and property of cattle food. Every useful substance is pressed into requisition, from the chaff or straw of the barn to the more expensive meals or prepared food.

When we look at the numbers and value of our cattle and sheep, the importance of making a due provision for their sustenance becomes evident. It is for this purpose chiefly that the large quantity of 17,000,000 to 20,000,000 tons of turnips and mangel wurzel are annually grown in the kingdom for feeding our cattle and sheep in the winter. In Ireland 5,000,000 tons are annually grown; in Scotland 6,500,000 tons; and in England fully as much must be grown, although we have no specific returns. When we consider that a beast will eat a hundred-weight, and a sheep a quarter of a hundred-weight per day, a due provision of this esculent root is certainly very necessary.

But a number of other miscellaneous substances are pressed into service from cheapness, or as being readily at hand. Brewer's grains and malt comings are readily purchased by some, for feeding. Rye-meal, barley-meal, sago flour, Indian corn-meal, rice-meal, anything which can be obtained cheaply and in quantity, comes in useful for fattening calves &c. Our American brethren have been growing potatoes to feed their milch cows on; but we should suppose the crop would scarcely be a remunerative one, or indeed in any way so beneficial as our ordinary kinds of food. The sorgho stems would be far preferable, from their saccharine and fattening properties.

But as an element in the meat-manufacture, whether in the building up and development of the young and growing animal, the maintaining of the produce of the dairy-cow, or the final preparation of the animal for the butcher, linseed is of the highest importance to the agriculturist. Linseed-cakes have been shown by experiment to be far superior to Indian-corn, pulse, or any description of food, for the production of fat. English oil-cakes are of course preferable, from being fresher, and containing more oil; but the consumption of foreign oil cake, as we have shown on former occasions, is largely extending, and bids fair still further to increase—our imports now are about 100,000 tons, nearly half coming from the United States, and consisting chiefly of cotton-seed cake. Although all the cake imported is not applied to feeding purposes, some of the rape cake being used for manure, still the bulk is for stock.

In Ohio and the other leading American States, a large quantity of Indian-corn stalks are used for fodder, and the cob is ground up for feeding; while in the West Indies the expressed stalk of the sugar-cane, and the tops which have been cut off, are highly relished by cattle.

An article of cattle food that has come largely into use of late years is the legume known as "locust" beans, being the food of the carob tree (*Ceratonia siliqua*), of which considerable quantities are now imported as cattle-food. They are grown and consumed to a large extent in Spain, Portugal, Crete, and in the greater part of Southern Europe. In Sicily the amount gathered reaches 11,000 or 12,000 tons a year. They have long been used as food for cattle in Spain, and other quarters, and are even relished by the inhabitants, when fresh and ripe, from the sweet pulp they contain. About 3,000 tons are grown in Portugal, and 2,000 tons are shipped annually from Crete. The mean of three

analyses gives 65 per cent. of sugar and gum and about 25 per cent. of nutritious vegetable matter. They are imported largely at Taganrog, and there is no doubt that their value as a feeding substance being appreciated, a very greatly increased supply could be obtained from several quarters in the Mediterranean.

How much of the science of farming and of all other arts depends upon the saving of material! upon imitating that beautiful law which chemistry teaches us, that in Nature nothing is lost! This was well demonstrated by Mr. Simmonds in his recent lecture on the utilization of waste substances. We may add another instance pertinent to the subject under notice. In Edinburgh there is a distillery of great extent, where economy of heat and material is especially carried out. The "dreg," a waste product, was produced in such quantities that all the cows in Edinburgh could not consume it, and there remained an enormous surplus which had to be discharged into the waters of Leith. This nuisance the modern Athenians protested against as an outrage on their sweet-smelling city. Something had to be done. Seedcake had to be used by farmers, and it occurred to the proprietors that the "dreg," as well as oil refuse might be pressed into cake. Machinery was accordingly fitted up, dreg-cake was prepared, and now the proprietors realize £60 a week from the waste product, which, although so much despised in Edinburgh, is now sent to the farmers in all parts of Scotland, to be returned in the form of fat cattle and butter and cheese.

A French veterinary surgeon, of the Imperial Guard, has called the attention of the agricultural world to a biscuit fodder for cattle in times of scarcity occasioned by drought. It is composed of the usual provender—hay, grain, and pulse. To these may be added many others—such as the refuse of the wine-press, the pulp of various roots, and the stalks of millet and maize, the leaves of the vine, the beet-root, and of certain trees, and the sweepings of the barn and hay-loft, which contain a vast quantity of nutritious matter in the flowers and seeds of hay, which are generally thrown away. All these ingredients are bruised and chopped together; a mullage of barley-flour is added, with a little salt; and the mixture is then left to itself for a few hours until a slight fermentation has set in, when it is put into square moulds, made into cakes, and left to dry in a current of warm air.

The Way to Make Money—Jacob Strawn's Economy.

"There has been a continual complaint of hard times. Good people, if you will take my advice I do believe we will have easy times in less than five years. I am afraid it will take three years of close attention to business and good economy with it to get out of debt. I feel certain there is gold enough within less than one foot of the top of the earth to pay ten times as much as we all owe, and please one and all. Pay strict attention, and I will tell you how to find it. In the first place when you go to town get everything you want, so that you need go no more than once in two months. Get your firewood forthwith; cut and split it up ready for use. In the next place, see that you have plenty of flour, meal and meat to hold out until after harvest. Next, see that your plows, hoes, harrows, and all your tools are in good repair. Have a place for all your tools, and every tool in its place.

Everything about farming, driving stock, fattening cattle, and raising horses and hogs, and almost everything about my whole business I have learned by experience. I feel so certain that there is such a large amount of gold in the soil, that I am anxious that all should try and find it.

Make it an universal rule to go to bed at 7 o'clock, from the 1st of October to the 1st of April, and get up at four o'clock, winter and summer. Whenever you awake in the night, do not lie in the bed awake. Instead of lying and rolling over, roll out and get at something that wants to be done. Get done eating before 6 o'clock, winter and summer.

Commence plowing for corn as soon as the frost is out of the ground in March. Plow two inches deeper than you ever plowed before. Get ready to plant it as soon as you can. The first warm days in April commence planting, and stick close to it until you are done. Commence plowing your corn when it is not more than three inches high, or as soon as the weeds begin to start. Plow it as often as you can. Plow close to your corn. When your corn gets large enough to bear it, plow it deep, especially the last plowing.

Some years ago I was at an educated man's house in Macoupin county, Ill., about six miles east of Carlinville. I had bought of him, at St. Louis, a lot of what he called fat cattle, just strong enough to travel up to Morgan county. He invited me to go home with

him, saying he had a better lot of cattle there. If my memory serves me right, our horses were put in what had been a frame barn under a small quantity of hay, and likely some grain. Almost all the weatherboarding was off his barn, which made it, I think, much colder in the barn, owing to the many draughts of air through it, than it was out in the open air. My horse had nothing to eat, and stood trembling like Balthazar. I being a tender hearted man, felt truly sorry for my horse. With some difficulty I got him plenty of feed, and then went back to the house much encouraged. There were a number of his neighbors there when I went in. I learned he had been building the season before, and had not paid his bills. He was complaining very bitterly of hard times. His boot heels were up against his mantel-piece, which was full of small holes. I asked him what made so many holes in his mantel-piece. He was then seated in his chair with his heels against his mantel-piece. He seemed to be diverted to think I was no smarter, and told me it was his boot heels that made the holes. I did not like to be accused of being foolish or silly before so many people, and I told him that I thought if those tracks that were on his mantel-piece were weatherboarding his barn or after his plow, it would tell to better advantage, and times would not be so extremely hard. If I understood it aright all these men were after money he owed them. It made a hearty laugh, and he looked at me as sour as sin. I expected to be ordered out of the house into the snow. He finally forced a smile, and I was glad of it. I think a man is doing wrong to place his heels higher than his head. It looks to me as though it was unhealthy. I think our heels were made to use under us, not over us.

Keep your tracks out of town only once in ten weeks instead of three times a week, and sometimes six days in the week. Please, one and all, try it. It will be the best step toward finding the hidden treasure so much needed.

For your own sake, your wife's and your babies', and friends, if you have any, be very cautious where you make your tracks.

Do not fail to get into bed at 7, and roll out early and attend to your business. There is no morning so dark but you can do something if the will is there. For Heaven's sake, and that of your wife, children and the State, let us all try it for three years, and if your creditor's see you are trying hard, and making tracks in the right place, they will have mercy on you. If they will not, come to Old Jake, and if he has it in his power he will help you. Remember, you must take his advice all through the piece.

Consult your wife, especially in all cases of difficulty. A wife who deserves the name will not fail to economize when she knows her husband's circumstances require it. Never keep her ignorant of your circumstances, for this has been the undoing of millions of families.

All our wealth and fine clothes come by hard labor. Even our pianos, and all our music which our girls prize so highly, come by hard labor. Our best girls, if they would go to bed three hours earlier than their usual time, and get up two hours sooner—which would give them one hour more to sleep than they now get—and when they did get up, help get the breakfast, wash the dishes, and sling the pots around—not so as to overstrain themselves—they would be much healthier, more handsome, and get better husbands.

I am satisfied that getting up early, industry and regular habits are the best medicines ever prescribed for health. Look at our general surveyors, when first running off the land in the West, wading in water from the shoe-mouth to waist, at night making calculations, keeping their minds employed, were well and hearty, while the hands employed in carrying the chain, when they stopped, had nothing to do, laid down and died like rotten sheep. When did you ever know of a general in the army, that was a man, but what was at his post when duty called for it, in good health? Look at your neighbors in the spring, about the time their corn should be planted. They get in a great hurry, getting harness, plows, and almost everything belonging to their business—bustling around, going to mill, getting part of a load of wood at a time, and not time enough to haul a full load at a time, they are so extremely hurried to get their corn planted.

If you would keep at work all the season, we would starve the lawyers and whip the doctors. If you want to find a treasure hidden of gold, haul your wood the first cold weather, and be sure to haul enough to last one year. When it comes rainy, bad weather, so you cannot plow, cut and split your wood. Make your tracks when it rains hard, cleaning your stables or fixing something which you

would have to stop the plow for, and fix in good weather. Make your tracks fixing your fence or gate that is off the hinges, or weatherboarding your barn where the wind has blown away siding, or patching the roof of your house or barn, or after the plow."

Interesting Correspondence.

At the request of a friend and subscriber, we publish the following correspondence between Thomas Jefferson and John Adams, written when the one was in his eightieth, and the other in his eighty-seventh year.

The letter to Mr. Jefferson was written soon after an attack upon him by the "Native of Virginia;" and when there was a strong expectation of a war between Russia and Turkey. This will explain some allusions in them.

[FROM MR. JEFFERSON TO MR. ADAMS.]

MONTICELLO, June 1st, 1822.

It is very long, my dear sir, since I have written to you. My dislocated wrist is now become so stiff, that I write slow and with pain; and, therefore, write as little as I can. Yet it is due to mutual friendship to ask once in a while how we do. The papers tell, that Gen. Starks is off at the age of ninety-three, — * * * still lives, at about the same age, cheerful, slender as a grass-hopper, and so much without memory, that he scarcely recognizes the members of his household. An intimate friend of his called on him not long since; it was difficult to make him recollect who he was; and sitting one hour, he told him the same story four times over.

Is this life?—with laboring step.

To tread our former footsteps? pace the round

Eternal? to beat and beat

The beaten track—to see what we have seen—

To taste the tasted—o'er our palates to decant

Another vintage?

It is, at most, but the life of a cabbage, surely not worth a wish, when all our faculties have left, or are leaving us, one by one, sight, hearing, memory, every avenue of pleasing sensation is closed, and athymy, debility, and mal-aise, left in their places?—When the friends of our youth are all gone, and a generation is risen around us, whom we know not, is death an evil?

When one by one our ties are torn,

And friend from friend is snatch'd forlorn?

When man is left alone to mourn,

Oh then, how sweet it is to die!

When trembling limbs refuse their weight,

When films slow gathering dim the sight;

When clouds obscure the mental light,

'Tis nature's kindest boon to die!

I really think so. I have ever dreaded a dotting old age; and my health has been generally so good, and is now so good, that I dread it still. The rapid decline of my strength, during the last winter, has made me hope sometimes that I see land. During summer, I enjoy its temperature; but I shudder at the approach of winter, and wish I could sleep through it with the dormouse, and only wake with him in spring, if ever. They say that Starke could walk about his room. I am told you walk well and firmly. I can only reach my garden, and that with sensible fatigue. I ride, however, daily; but reading is my delight. I should wish never to put pen to paper; and the more because of the treacherous practice some people have of publishing one's letter without leave. Lord Mansfield declared it a breach of trust, and punishable at law. I think it should be a penitentiary felony; yet you will have seen that they have drawn me out into the arena of the newspapers. Although I know it is too late for me to buckle on the armor of youth, yet my indignation would not permit me passively to receive the kick of an ass.

To turn to the news of the day, it seems that the cannibals of Europe are going to eating one another again. A war between Russia and Turkey is like the battle of the kite and snake; whichever destroys the other, leaves a destroyer the less for the world. This pugnacious honor of mankind seems to be the law of his nature, one of the obstacles to too great multiplication, provided in the mechanism of the Universe. The cocks of the hen yard kill one another; bears, bulls and rams do the same; and the horse in the wild state, kills all the young males, until worn down with age and war, some vigorous youth kills him. * * * I hope we shall prove how much happier for man the Quaker policy is, and that the life of the feeder is better than that of the fighter; and it is some consolation, that the desolation by those maniacs, of one part of the earth, is the means of improving in the other parts. Let the latter be our office; and let us milk the cow, while the Russian holds her by the horns, and the Turks by the tail. God bless you and give you health, strength, good spirits, and as much of life as you think worth having.

THOMAS JEFFERSON.

[MR. ADAMS' REPLY.]

MONTICELLO, June 11, 1822.

DEAR SIR.—Half an hour ago I received, and this moment have heard read for the third or fourth time, the best letter that ever was written by an Octogenarian, dated June 1st. I have not sprained my wrist; but both my arms and hands are so overstrained that I cannot write a line. Poor Starke remembered nothing, and could talk of nothing but the battle of Bennington. * * * is not quite so reduced. I cannot mount my horse, but I can walk three miles over a rugged rocky mountain, and have done it within a month; yet I feel, when sitting in my chair, as if I could not walk across the room. My sight is very dim, hearing pretty good, memory poor enough.

I answer your question—is death an evil?

It is not an evil. It is a blessing to the individual, and to the world: yet we ought not to wish for it until life becomes insupportable.—We must wait the pleasure and convenience of the "Great Teacher." Winter is as terrible to me as to you. I am almost reduced in it, to the life of a bear or a torpid swallow. I cannot read, but my delight is to hear others read; and I tax all my friends most unmercifully, against their consent.

The ass has kicked in vain; all men say the dull animal has missed the mark. This globe is a theatre of war; its inhabitants are all heroes. The little eels in vinegar, and the animalcules in paper water, I believe are quarrelsome. The bees are as warlike as the Romans, Russians, Britons, or Frenchmen. Ants, Caterpillars and Canker-worms, are the only tribes among whom I have not seen battles; and heaven itself, if we believe Hindoos, Jews, Christians and Mahometans, has not always been at peace. We need not trouble ourselves because of evil doers; but safely trust the Ruler with his skies. Nor need we dread the approach of dotage: let it come, if it must. * * *

It seems, still delights in his four stories; and Starke remembers to the last, his Bennington, and exulted in his glory. The worst of the evil is, that our friends will suffer more by our imbecility, than we ourselves.

In wishing for your health and happiness, I am very selfish; for I hope for more letters. This is worth more than five hundred dollars to me, for it has already given me, and will continue to give me, more pleasure than a thousand. Mr. Jay, who is about your age, I am told, experiences more decay than you do. I am your old friend,

JOHN ADAMS.

PRESIDENT JEFFERSON.

The Coming Wheat Crop.

Col. Johnson, Secretary of the New York State Agricultural Society, has made the following estimate of the comparative yield of the wheat crop of 1858 and 1859, in the United States, predicated, we presume, upon the probable number of acres sown:

Estimated product for	1858.	1859.
New York	22,000,000	20,000,000
Pennsylvania	20,000,000	20,000,000
Virginia	20,000,000	18,500,000
Kentucky	10,000,000	8,500,000
Ohio	25,000,000	22,000,000
Indiana	15,000,000	13,000,000
Illinois	15,000,000	14,500,000
Other States	50,000,000	42,000,000
Total	180,000,000	158,500,000

Loss of a Cleveland Bay.

John R. Woods, of A. Bernierle, Va., has met with a serious loss in the death of a valuable Cleveland Bay stallion, which he was importing from England. This horse cost \$3,000 on the other side of the water.

To Prevent Cows Kicking.

Take a rope or strap three feet in length, and make a loop at one end, then carefully place the loop around the hind legs just above the knee; run the other end through, and draw the legs together as close as possible; then wrap the remainder of the rope round the part encircling the legs, and fasten. When the rope is properly adjusted, it is impossible for the cow to kick.—*Country Gent.*

Fat Sheep in Lenawee.

The Adrian Watchtower gives the following as the weight of four fat Leicester sheep lately slaughtered in that city. "Their united weight was 480 pounds. Weight of each respectively, 100, 220, 123, 137—averaging 120 pounds. We are told that the weight of the carcass of an ordinary good sheep, is from 50 to 75 pounds, averaging about one-half the weight of Mr. Woolsey's sheep."

The Berrien County Agricultural and Horticultural Fair, will be held at Niles, on the Society's beautiful grounds, on the 28th and 29th days of September.

After whipping and coaxing had failed to induce a horse to move, the gentleman who was driving, or trying to, gave up. Then a cartman went up to him, saying, "If you please, sir, I'll make him go." The privilege was granted, and going to the gutter he took up a handful of mud and rubbed it upon the nose of the horse, and the horse started off. The cartman accounted for the effect, by saying, it gave him a new idea.

NEW ADVERTISEMENTS.

G. V. RAYL, Morrisania, N. Y., Seeds for sale.
J. S. TIBBETTS, Plymouth, Mich., Pigs for sale.
J. C. AYER, Lowell, Mass., Cherry Pectoral.

ANSWERS TO CORRESPONDENTS.

R. F., Three Rivers.—Your corn was sent by express, May 4th.

MICHIGAN FARMER.

R. F. JOHNSTONE, EDITOR.

SATURDAY, MAY 7, 1859.

Wool.

The wool market at the east exhibits little or no change, though the tendency seems evidently towards a decline in prices. There is no product of the west which is more dependent on eastern fluctuations than Wool. All the buyers who come into our market are either eastern men or the agents of eastern houses, the prices go up and down as they indicate. Against this state of things the producer has no remedy beyond the power of holding on if he only knows enough to do so; or when he does know enough, he must be able to do so without damaging his other business. That the present state of a decline in the market will continue to the time of the wool clip every man who deals in wool will readily see. It is for the interest of all who are engaged in manufactures to get their raw material at the very lowest rates, and it will easily be seen that it is for the interest of all engaged in speculation to keep it down, for if they cannot lay in a stock at low prices during the season when the wool grower brings his stock to market, he cannot have a chance to make anything for the rest of the year. We and they have to admit that the whole crop is short of supplying the wants of the country. But what of that! are they not accustomed to dodge round all the sharp corners of Wall street, New York, or State street, Boston, and to take the chances? The wool growers themselves are the flock which they shear, and the only trouble is to get them penned and well washed, before these eastern men apply the shears. This process is now going on, and we have no doubt but that a great many will get caught, and be thoroughly dipped, and have all the grease taken out before the shearing time. But this is usual, after they have had a fair clip taken off, they will probably shiver a little and shake themselves with a melancholy bawl or two, but they will go on and grow a fleece for next year just the same as ever, and again go through the process next year.

To give an index to the prospects and prices as regarded by the New York buyers, we give from the *Tribune*

Tellkamp & Kitching's Wool Circular.
New York, May 1, 1859

We have to report a quite market during April, especially so up to the 21st, at which date a large sale at auction of foreign and domestic wools was announced. The sale, however, has been subject, and deservedly, to much censure; it was a decided failure. A small quantity only was offered, and that mostly bid in; the balance was withdrawn. In fact, the sale had a bad effect on this month's business, and clearly proved that similar auctions will not do for a great market like this. Liberal auction sales only, will give satisfaction to both sellers and buyers.

Since the date above mentioned, there has been more doing, but at a decline from previous rates of about 5 to 10 per cent. Domestic Fleeces Wool will all be taken before the new clip, the stock of which being very light, the prices will not be much lower.

Pulled Wool is in better supply yet there is little demand for it even at the reduced rates. California and Texas Wools have been selling freely at considerably lower prices, in consequence of the large stock in market and limited inquiry. Buyers of Wool in these States will do well to operate cautiously during the new clip.

The prospect of a war in Europe seems to have much influence in the Wool market there, and the prices of fine and medium wool, have receded somewhat. Should the war actually occur, it will be felt more and have its bearing on our market for Domestic Wool, the clip of which is approaching, and we have but little doubt that prices will not rule as high as the farmers have been anticipating. The events of this year will cause some fluctuation, and therefore deserve attention.

Fine Foreign Wool has been but little sought for during April, and, although the present stock is mostly of the new clip, and in good condition, the prices are from 5 to 10 per cent lower. There is a good supply compared with that of last winter.

Low Foreign Wool remains about the same as before, so far as the stock is concerned, but prices are easier at least 5 per cent. for desirable kinds, and from 5 to 10 per cent. for neglected qualities.

Trade being considered in a healthy state, and the importations of Wool not larger than necessary, we may look for a fair business during the next season.

Flour and Breadstuffs.

By way of posting up our readers on the relative position which our markets and those of Europe are placed in, we print the following letter from Baltimore, relative to an importation of French flour into that market. It is taken from the *Price Current* of that city. The very fact of an importation of the kind is depressing, and shows that our prices are only kept up by the mere local necessities of the times. The letter is as follows:

"A number of samples of fine French and Belgian Wheat and Flour were exhibited on 'Change, on Thursday morning last, by Messrs Ford & Rogers, which they had received by the steamer Europe, lately arrived. The samples of flour were from Nantes, Rouen and Abbeville, the samples of red Wheat being from the same markets; there was also a sample of white Wheat, from Antwerp. The flour is such as is known in the English markets as 'fine French flour,' and compared very favorably with our highest grades of family brands, after a thorough examination by an experienced and capable judge. These samples attracted very general attention and remark on 'Change. We understand that both the Flour and Wheat can be laid down here at much less cost than the same grades of American Flour and Wheat, and that Messrs F. & R. are authorized to fill orders for quantities, to be shipped from European markets, up to the first of June next."

Worth Reading.

[Farmers and farmers' wives and daughters, read the communication entitled "A small leak may sink a ship." The author sends us the following note in regard to its origin:]

MR. EDITOR:—I have showed the inclosed article to my neighbor, whom I highly respect and esteem, with the request that I may send it to you for insertion. He says, that if it will be likely to open the eyes of other farmers, who like him have always worked at random, he gladly consents to it. I have often urged upon him the necessity of bestowing a good education on children, but his uniform reply has been, that it is well enough for people that do not work for a living, but of no use to farmers. Now he discovers that there has been a leak in the ship that he had not the learning to discover, but which an hour's use of the pen has laid open to view, and he believes it is best to teach his children not only how to work and earn, but to give them an education that will enable them to save.

General News.

—Rev. Jabez Fox has been recently appointed Chaplain to the State Prison at Jackson.

—Thos Jernigan, Esq., has assumed the editorship of the *Michigan City Enterprise*.

—James D. Porter, the Kentucky Giant was recently found dead in his bed. He was forty-nine years old, and seven feet and nine inches high, and weighed three hundred pounds.

—The *Gazette* says that the hard times have not destroyed the energy and public spirit of the citizens of that region, but that they are making extensive preparations for improvements in the building line this spring.

—J. N. Ingersoll, Esq., editor of the *Owosso American*, gives notice in his paper that he is collecting materials for a history of Shiawassee county.

The Weather Prophet Unveiled.—Mr. W. W. Ryan, the Weather Prophet, says he is determined no longer to hide his light under a bushel, but that it shall be spread abroad till his fame shall shine as a meteor over the Indian seas, and his name go down to posterity like a blazing rocket on the night of a Fourth of July celebration. He has published to the world his "Theory of the Winds and the Weather," and now, for the trifling sum of 25 cents, all men may read and be as wise as he. It is for sale by the Author, and by the publisher, S. D. Elwood of this city.

—A woolen factory has lately been established on the Pacific coast, at Salem, Oregon. It is furnished with the best machinery from the Eastern States, and is said to be turning out cassimeres equal to any manufactured in New England.

—The Wisconsin State Fair is to be held from the 26th to the 30th of September, inclusive. The place of holding is not yet decided.

—A breaking away of the embankment of the Erie Canal took place at Holly on Monday last, while men were at work upon it. Two of the workmen lost their lives; being swept away by the flood and drowned. This was a new embankment, completed last year at a cost of \$150,000, and designed to straighten and shorten the old canal, which, running around this section, has been kept in use all the time, and will continue to be used till the embankment can be rebuilt.

—Keep the new cent pieces out of the children's hands. They are poison, and several instances of death have occurred where they have been swallowed by the little ones.

—It is estimated that the April earnings of the Southern Road will show a decrease of between \$50,000 and \$60,000 from the receipts of last year. The Central will also show a considerable decrease, but how much is not yet known.

—The friends of the Hon. Chas. Sumner will regret to learn that a note from Paris, dated April 4th, states that Senator Sumner has left Montpellier for Rome. He was, at last accounts, in a very bad condition of health.

—If any people in the world ever needed an apostle to cast their devils out, it is ours who live in this water-logged country. The miasma poison of our swamps and marshes becomes a veritable devil in the blood to revel in the Agues and Fevers which shake and scorch us all. Ayer's "AGUE CURE" is said to be the apostle we need, and some of our neighbors who have tried it, confirm the report. —*Journal, Piano, Ill.*

—The Mt. Vernon (Ind.) Banner says the wheat on the low lands in that section, was very generally seriously damaged by the wet weather and freezes during the winter.

Scientific Intelligence.

Agricultural Patents issued for the Week ending April 19, 1859.—Geo. Estery, Whitewater, Wis. Harvester.

W. H. Hovey, Springfield, Mass. Cornshellers.
J. J. Johnston, Alleghany, Penn. Cornshellers.
Geo. Kenny, Milford, N. H. Combined stamp extractor and press.

J. R. Marston, New York City. Cob and grain mill.
S. Ray and M. R. Shalters, Alliance, Ohio. Harvesting machines.

J. V. A. Wemple, Chicago, Ill. Harvesters.
H. W. Rowland and E. Forbes, Newport, Ohio. Mole plow.

Agricultural Patents issued for the Week ending April 26, 1859.—Geo. and W. Chamberlin, Olean, N. Y. Harvesting machines.

David Kamler, Union Deposit, Penn. Machines for raking hay.

J. Reamer and H. Miller, Conrad's Store, Va. Corn harvesters. The *Scientific American* remarks of this machine that it "cuts down corn or sugar cane with an oblique cut similar to what is done by hand with a knife. The knife can be raised or lowered to suit stiff and tight cutting. The platform can be adjusted to a greater or less length so as to receive corn or cane. The reel arms are set so as to deposit the corn or cane straight upon the platform. The platform swings on a centre so as to be kept horizontal while going down hill, and thus prevent the falling out of the corn; also so that it may be tilted and the corn dumped. The wheels of the carriage are set so as to prevent side draft. We regard this a very perfect machine."

Book Notices.

Blackwood's Magazine for April.—This sterling old periodical "still holds the even tenor of its way"—always interesting, never dull. Not a number of its long series is ever taken in hand and thrown aside for want of sufficient interest to detain the reader—a rare merit, certainly, in a periodical, and one we are quite sure that can be claimed for Blackwood alone.

The present number contains a continuation of "A Cruise in Japanese Waters," which increases in interest. "The Luck of Ladysmede, Part II," which promises to be one of those charming tales or novelettes for which Blackwood is so famous.

"A Winter Journey," lively and sportive. "The Turks in Kalafat—1854—Part II." "Christianity in India," an able review of Kaye's late work under that title, being a history of the introduction and progress of Christianity in India, from the sixth century down to the present time, with sketches of the early missionaries, and of the English Bishops—Middleton, Heber, and Wilson.

"Adam Bede a commendatory review of Elliot's new religious novel—and three articles on 'Parliamentary Reform,' one of which contains a notice of M. Chevalier's late work on the 'Fall in the Value of Gold,' which the writer alleges will, of itself, silently work out a change in the elective franchise, sufficient to satisfy the most liberal of radicals.

Published by Leonard Scott & Co., 54 Gold Street, N. Y., at \$3 a year, who also publish the four leading British Reviews at \$3—Blackwood and the Four Reviews, \$10.

Merry's Museum.—The May number of this pretty little monthly for children is received. It is full of pleasant pictures and such stories as please the little ones, together with riddles, puzzles, conundrums, and Merry's Monthly chat with his friends. Published in New York at \$1 a year.

Foreign News.

Austria has sent an ultimatum to Sardinia, demanding her disarmament and the dispersal of her volunteer troops. Three days were given her in which to reply, and, if she refused, war would be declared.

Eighty thousand more Austrians were ordered to the Ticino.

Austria had rejected England's final proposition.

French troops were marching towards Piedmont.

The English government had telegraphed to Vienna a strong protest against Austria's menace to Sardinia, and it was reported that Austria replied, refusing to reconsider her determination, and that she had already prepared a manifesto to accompany a declaration of war.

The French troops were in process of rapid concentration on the frontiers of Piedmont and at Toulon.

The final proposition made by England to Austria was for a general disarmament by means of commissioners, including Sardinia, and the admission of the Italian States to the Peace Congress, as at Laybach. To this proposal all the Powers assented except Austria, who rejected it.

The occurrence of the English holidays prevented the full development of the effect of this news.

The French funds fell three per cent, and there was a general panic on the Bourse.

An Act to prevent the Destruction of Game at certain Seasons.

SEC. 1. The people of the State of Michigan enact, No person or persons shall kill any wild buck, doe or fawn, at any time during the months of February, March, April May, June or July.

SEC. 2. Any person who shall expose to sale any green deer skin or fresh venison, or shall have the same in his or her custody or possession at any time during the months aforesaid, shall be deemed to have violated the first section of this act.

SEC. 3. Whoever shall violate the first section of this act, or shall conceal, expose for sale, or have in custody or possession, any green deer skin or fresh venison, at any time during the months mentioned in said first section, shall forfeit twenty-five dollars.

SEC. 4. No person or persons shall kill, destroy, or take, or pursue with intent to kill, destroy, or take by any device, contrivance or means whatsoever, any wild turkey between the first of February and the first day of September, or any woodcock between the first day of March and the fourth day of July, or any partridge ruffed grouse or pheasant, between the first day of February and the first day of October, or any prairie chicken or pinated grouse, or any mallard or teal duck, between the first day of February and the fif-

teenth day of August, or any quail between the first day of January and the first day of September, in each and every year.

SEC. 5. Every person who shall expose to sale any wild turkey, woodcock, partridge, prairie chicken, mallard or teal duck or quail, or who shall have the same in his or her custody or possession, at any time during the months when the killing, destroying, taking or pursuing with intent to kill, destroy or take, as herein prohibited, shall be deemed to have violated the fourth section of this act.

SEC. 6. Every person offending against the fourth and fifth sections of this act, or either of them shall be subject to a penalty of five dollars for each and every bird so killed, or taken, or pursued with intent to kill, destroy or take, to be sued for and recovered in the manner provided for in this act, with costs of suit.

SEC. 7. Every penalty imposed by the preceding sections of this act, shall be sued for in the name of the people of the State of Michigan, before any Justice of the Peace in which the offence shall be committed, which suit shall have been commenced and carried on in the same manner as prosecutions for other misdemeanors are; and out of the recoveries of such suits one half thereof shall be paid into the treasury of the county for the benefit of common schools.

SEC. 8. In every such suit, in case any of the green deer skin or fresh venison, or birds mentioned in this act, shall be found in custody or possession of any person or persons during the times prohibited by this act, such person or persons shall be deemed held and taken to be the person or persons killing, destroying, or taking the same, and liable to the penalties imposed by this act; and it shall not be necessary in any such suit, on the trial thereof, to prove the killing, destroying, or taking of such birds or deer by the person or persons in whose custody or possession the same shall be found.

SEC. 9. It shall be unlawful for any person to destroy or disturb the eggs of any of the birds protected by this act.

SEC. 10. No person shall kill or destroy any other, from or after the first day of November, under the penalty of five dollars for each animal killed in violation of this section.

SEC. 11. The provisions of this act shall not be construed to include any Indians located within the limits of the State.

"A Small Leak may Sink a Ship;"

HOW TO GET "LUCK" ON YOUR SIDE.

MR. EDITOR:—My neighbor, an industrious, worthy farmer, recently came to me in trouble, saying: "I am getting discouraged in regard to my debts." He then made the following statement: "Myself and wife have been married nearly twenty years. We began life on this farm of 160 acres, worth then some \$2,500, and for which I owed \$500. I also bought stock, team and tools, on credit, for nearly as much more. We went to work in good spirits, and hoped soon to be independent: yet, somehow, 'luck' has been against us. Between putting up a new house and barn, and the expenses of my family, I have always owed more or less, but on an average about the same as when we began. We hoped when our children should grow up they would help us; but I find they need all they can earn to pay for their own clothing and expenses. And now, I am no nearer being out of debt than at the beginning. Some of my creditors are now impatient, and I must borrow if I can, at ten, twelve, fifteen, or even twenty per cent., to pay,—but I am getting discouraged. Tell me, what shall I do?"

Now, I am conscious of making many mistakes myself, and feel but poorly prepared to give advice; yet there were some particulars in which I thought if I could bring about a reform in my friend's method of doing business, I could materially help him; so I started three points of enquiry, as most important in his case.

1. What is the actual amount of your debts, and to whom do you owe them? As a counterpart of this: What is due you, and from whom? Of course you can easily ascertain the balance.

He protested he was "a poor scholar," and never did much writing, but he had an account book, and would try to reckon up, if I would write down for him. But his accounts were in confusion. Some mechanics he had reckoned with six months ago; others, one, two or three years since, but he guessed his affairs with them were somewhere towards even.—Finally, as an approximation to the truth, we made out the debt and credit side, as nearly as we were able to do.

2. How have your merchant's accounts stood from year to year? Well, he said, the merchant kept the books, on both sides, and he supposed accurately. He had always been more or less in debt to them. He and family had "traded" there, and he had given orders on the store to hired men, hired girls, and mechanics. Indeed, if any one would take a "store order," he felt as if the debt was half paid. But he had always been turning in produce, and sometimes it did seem as if the store consumed nearly all their earnings.

3. What proportion of your purchases

have been unnecessary, or at least where a lower priced article would have been as respectable or better? To illustrate: A few days ago, the wife of a respectable farmer, with her rosy cheeked daughter of fifteen, came into the store where my wife was purchasing. The daughter chose a bonnet and trimmings for herself, worth some \$6.00, but the milliner coming in at that moment, was appealed to for her opinion, which was this: "You will look much better in a 'flat,' than in the bonnet." The price of the "flat" with trimmings was \$2.00. But Miss had set her heart upon the bonnet, and her mother indulged her in the purchase. There, \$4.00 were worse than wasted, to gratify the bad taste of the daughter, in her aspiration to the young ladyship.

Here he and his wife admitted that they and their children had purchased a good many things that were only mere finery, and of little or no service.

Now let us look at these three points only:

1. By keeping no memorandum of debts or dues, you have never really known your own circumstances. A note becomes due—no provision is made for payment. You have wasted your time in trying to borrow, at ten, fifteen, or even twenty per cent., to save costs. In twenty years you have paid an average of at least \$25 a year for extra interest, or "shave money." The interest on this tax has been half as much more,—in all \$750. All, or nearly the whole of this might have been saved, by forecast, and a determination to get out of debt, making provision as fast as possible for doing it.

2. You have paid your merchant from eight to ten per cent. extra on your purchases, by asking credit. I do not blame the merchant. He charged this percentage upon his credit customers as insurance against losses. If you join the company you must pay your proportion of it. This, with its interest for the last twenty years, will amount to \$20 in a year, or \$500 in the whole.

3. For want of system, in sitting down some rainy, or long evening, with your wife and older children, and making out a list of necessities, viz: the groceries, for family use, which are really needed for comfort and respectability; and then the clothing for your wife, your children and yourself,—the bedding and furniture that the family actually need, your purchases have been made at random. Your family may really have been pinched, where a wise economy would have supplied them, while purchases have been made that were of little or no use. The tobacco tax paid by you and your two sons, can not be less than \$10 a year. Nor shall I go beyond the truth in doubling this amount, for things unnecessary, and say, your purchases have averaged \$20 a year for twenty years, of things not needed, and to add \$100 interest on the same: total \$500.

Here, my dear friend, is a loss of \$1,750, of which, though in debt at first, I think you might have saved \$1,500. To-day you might, with system, have owed no man a dollar.

Both he and his wife were astonished, and saw how "luck" had worked against them,—by leakage.

Now, I am prepared to suggest a course that I believe you will resolutely adopt, for reasons you can clearly appreciate. These will soon put a new face on your affairs.

1. Enter on your account book the date, sum, rate of interest, when due, and to whom, of every note you give; also what is due to you, on the other page. Look it over, and if possible, make provision for payment, when each one shall fall due, or get the time extended.

2. Reckon and settle forthwith, by note or otherwise, with every man with whom you have an account. Especially, go to your merchant, and reckon with him. Learn how much you owe, and give him your note payable in produce, if he will take it; if not, in money. Then tell him that henceforth you go on the ready-pay system, and will be glad to continue business with him, minus insurance.

3. In spring and fall, make out a written list of what is necessary for the family, and without the most urgent reasons, purchase nothing beyond it, till out of debt. If for any reason, you think best to have an open account at the store, get you a pass book (costs a dime), and have every article of debt and credit entered. Thus you can detect any mistake, and ascertain in a few minutes how you stand. Be sure, however, you do not get on the debtor side, for if you do, goods will rise, and your produce fall in price.

Finally—give your sons and daughters such an education as shall compel them to work hard, with "luck" always against them.

R. Y. E.

—Out of 2,995 elms which three years ago adorned the Champs Elysees, in Paris, 3,500 are dead and 2,000 are in a dying state. Upward of 900 are stated to have perished by gas exhalations.

The Household.

"She looketh well to the ways of her household, and saileth not the bread of idleness."—PROVERBS.

EDITED BY MRS. L. B. ADAMS.

GOING UP AND DOWN THE HILL.

BY CARRIE MEYER.

A little work—a little play—
A tottering off along the way—
This is the sum and substance still
Of going up and down the hill.

And yet 'tis more than fleeting dream,
Or idle poet's silly theme—
Or blending of the sea and rill—
This going up and down the hill!

That group with garlands on their heads—
Oh, what a glory round them spreads!
Their cheeks are bright, their pulses thrill,
For they are going up the hill.

And shall the stormy cloud that lowers,
Make them forget the stars and flowers?
Is change, and blight, and darkness, still
The end of going up the hill?

But some now lying in the shade,
With myrtle on their pale brows laid
E'en while they heard the song-bird's trill,
Grew tired of going up the hill.

Alas for lips so strange and cold!
Alas for hearts so early old!
That eyes are stern, and voices shrill!
'Tis dreary going down the hill.

But here the sunbeams' softened sheen
Falls o'er a band with looks serene,
And hope and faith their spirits fill,
Though they are going down the hill.

And here is one who walks aside
From all the crimson glare of pride:
Her pathway leads through shadows chill
For she is going down the hill.

The rosy days have long passed by,
Yet joy is hers that cannot die;
Lest is her speech—love is her will,
Though she is going down the hill.

Oh, may the angels ever smile,
And soft sweet sounds our souls beguile
Into the valley dark and still—
The end of going down the hill.

—Saturday Evening Post.

Women in Business.

A correspondent writes: "I wish to ask you as one who has been in public business for some time, what are your ideas in regard to woman's fitness for such positions, and if, in your opinion, she is as likely to be happy and contented there as in the more private walks of social and domestic life?"

To the first question it might be answered in general terms that it is much the same with women as with men; some will work their way through the world, place them where you will, while others, men as well as women, would never seem to get through at all without being pushed or pulled or carried along by the more courageous and energetic; but these are generalities familiar to every one, and not a definite reply to the question asked. Our ideas in the matter are simply these: that not sex, but ability and inclination, governed by a prudent regard for the proprieties of life, should alone limit the question of fitness for any position connected with business to which woman may be called. If circumstances seem to make it necessary that a woman should handle other implements than those in her kitchen or parlor, she ought at least to have the privilege of making a trial, and if she proves capable, and does the work as well as a man could, why is it not as well as if a man had done it? As to engaging in any of the public professions, such as the law, the ministry, or the practice of medicine, we consider that a personal matter to be decided by the wishes and abilities of the individuals themselves, though for our own part we should never care to see a woman in the pulpit or at the bar; as physicians we should be glad to have them multiplied, and would not throw a straw in the way of their earning a living, a fortune or a name in any manner they see fit to do, provided it is honorable, sensible and womanly. There are coarse, masculine natures in woman's form, as well as refined and gentle natures in man's, and these can readily take upon themselves the heavier burdens and walk with boldness in the more public paths of life. To those who can do so with credit and benefit to themselves and society we are always willing to say a hearty God speed. The great difficulty in women not knowing what to do, or how to do, lies in the want of early education and training of their minds to business habits. They go to school, study their books and recite lessons from them a few years, then go home with the idea that their education is finished, and that nothing now remains but to get married, and then go on just as it happens till life is made an end of. What they may have learned at school is seldom thought of as having any bearing upon their every day life or the duties connected with it; indeed, it is too often the case that a girl's school life is devoted to learning things for which she finds little or no use in the realities of the experience which awaits her in the world.

If girls could be taught more as boys are, with some object in view, some use to which their learning could be applied, and taught such things as could be made use of by them when circumstances render it necessary to secure their own living, there would be fewer helpless women in the world, and less complaint of man's monopolizing all profitable employments. There is among girls generally a lamentable lack of order, promptness and application. If they undertake to work at anything, it is with no idea of persevering in it to perfect themselves in a branch of business that may be of service to them, but if they can manage to accomplish it somehow, put in the time, and get their pay, they have attained the height of their ambition. This is a fact that has operated very much against them, and kept them out of places where they might have been employed with profit and advantage to themselves and others. When boys are set to learn a trade, they expect to perfect themselves in it, to make a business of it, and you may see them working steadily their regular hours year after year, ambitious to excel, and to have each successive task turned off in a more workmanlike manner than the former; but with girls, as we have seen them in their professed apprenticeship at the same trade, there is a want of application, a restlessness, a disposition to slight the work, to take advantage of the overseer the moment his back is turned, to chatter and giggle, without a thought that they are injuring themselves as much as him. And he, good-natured man, would say, "I know, I see it all very well; but they are girls, I can't punish, and I do not want to scold."

Yes, and because they were girls they went on taking liberties, neglecting the interests of their employers and trifling with the opportunities given for improvement till they lost them all, and boys were taken in their stead. Thus we have been led to believe that it is not so much on account of their sex, or from lack of ability, that women are rather distrusted and looked upon as incapable of transacting business, but for want of business habits and persevering application on their part. We do not believe that such habits come by nature to boys any more than to girls, but boys are taught both by precept and example, from infancy, that without such qualifications there is no success in business, and business, in some shape or other, they know to be their destiny as sure as they are men, while girls are usually brought up with quite another set of ideas no less thoroughly instilled into their minds.

But we must not take up more room on this part of the subject at present. Is our friend answered when we say in reply to the first question, that we consider a woman fit for any position which she is capable of filling with credit and benefit to herself and the world?

The second question may have as many different answers as there are different temperaments in women. If all men were gentlemen the reply might be limited to a narrower compass. It might then be said that any sensible woman could be as happy in public as in private life, for everywhere she would be treated with the deference and respect due to her sex, her virtues and her station. As it is, men being just what they are, a woman who steps aside from the charmed and sacred circle of the household must expect to be treated by them in a measure as they treat each other. If she can harden her nature to meet their hardness, if she can take business matters in a business way, laying aside all womanly sensitiveness to slights, or indifference, or unkind words, in short, if she can be more the philosopher than the woman, she has as good a chance to be happy, after that manner of happiness, in public as in private life; at least she is on an equal footing with men in this respect, and could not reasonably be very unhappy. Some women with strong nerves, and masculine natures not overstocked with sensitiveness, are never happier than when battling openly with the world, asserting what they call their rights, and creating for themselves a public notoriety. But these are individual exceptions. We are talking of women as women, and, to come to the point at once, it is our honest belief that in no position can a true, loving-hearted woman be so happy as in the home provided for her by her husband, surrounded by children who shall have cause to "rise up and call her blessed." A woman with such a home, if she is wise enough to know when she is well off, will pay little heed to the temptings of the demon of restlessness which is drawing so many from their household shrines. There are enough who are forced to go out into the world; let all who have homes and kind protectors and loving ones around them, thank God and be contented to stay there.

Nevertheless, we believe, as we said before,

in having women prepared by early education and training, for any emergency that may befall them. Even if they are never called upon to support themselves, or obliged to assume important and responsible positions in public life, they and their families, and, in consequence, society and the world, will be benefited by the cultivation in the domestic circle of such habits as would secure success in the business of the world.

The elements of happiness are very differently estimated by different people, but, in our humble opinion, nowhere do they so abound for women as within the hallowed precincts of home.

Household Varieties.

You may insert a thousand excellent things in a newspaper, and never hear a word of approbation from the readers, but just let a paragraph slip in (by accident) of one or two lines not suited to their tastes, and you will be sure to hear of it.

Some eyes threaten like a loaded and levelled pistol, and others are as insulting as hissing or kicking; some have no more expression than blueberries, while others are as deep as a well which you can fall into.

We should meet each morning as from foreign countries, and spending the day together, should depart at night as into foreign countries.

Carlyle's Style.—Come now, O my Thomas! thou doubtful doubter of doubts, thou flounderer on the flat, miry and bilgy, of tideless Toryism.—I have somewhat to show thee. Look! what seest thou with those staring eyes of thine; those eyes so big and bullet-like, globed in such spheric speculation! It shall be told thee thou seest: A car, four-wheeled and many-sized and springless. No two of the wheels are of the same size—in order prescript and irrevocable. It goeth forth backwardly, and hind-quarterly, and stern-foremost, and joineth in many directions at once, and therefore hath no locomotion. Time and half a times it is half topsy-turvy, and otherwhiles the sconeless traveller therein ensconced, knoweth not whether he is sitting on his head, kneeling on his heels, or standing on his elbows. Loud rumbleth and rough-tumbleth this mystic and portentous car; and yet it stayeth where it listeth, and where that is no man knoweth, not even its inventor. And what sort of a car is that? Ho! ho! Peter and Paul! Ha! ha! Mrs. Grundy and Dame Partington! Why, man, dost thou ignore this car? Dost thou not recognize this car? Why, man, it is Thyself—it is Carlyle!

Horticultural School for Females.—It is proposed to establish a school on Long Island, about forty miles from New York city, for the purpose of teaching horticulture to poor orphan girls. The land has already been given, and the foundation for the necessary buildings laid. As much of the labor necessary to grow all the finer fruits and vegetables can be performed by females, a new avenue for the employment of women can thus be opened.

In the proposed school all the collateral and incidental branches of industry connected with horticulture will be taught, as, for instance, the canning of fruits and vegetables, the care and knowledge of hot houses, systematic agriculture, in connection with an aviary and the raising of fowls, &c. As it is intended that the establishment shall be a home, the duties of housekeeping will form a subject of instruction, and a matron will initiate members in household affairs, so that each girl, on leaving the school, will, besides being a practical horticulturist, be qualified to manage a household.

I tried to make crooked things straight, till I have made these knuckles sore, and now I must leave it to the Lord.—John Newton.

A lady who called on a witty friend who was not at home, finding the piano dusty, wrote upon it *slattern*. The next day they met, and the lady said, "I called on you yesterday." "Yes; I saw your card on the piano."

A gentleman somewhat distinguished for the use of choice language, found fault with his pudding, as having too much "caloric" in it, which the landlady took in high dudgeon, declaring that she never used the article—indeed, there never was any in the house!

The Philosophy of Fainting.—If a man, a woman more likely, faints away, instead of yelling out like a savage, or running to him to lift him up, lay him at full length on his back on the floor, loosen the clothing, push the crowd away so as to allow the air to reach him, then let him alone. Dashing water over a person in a simple fainting fit is a barbarity. The philosophy of a fainting fit is, the heart fails to send the proper supply of blood to the brain; if the person is erect, that blood has to be thrown up hill; but if lying down, it has to be projected horizontally, which requires less power, as is apparent.

A newspaper "squib" writer says that a French woman slides, a Spanish woman glides, an American lady trots, and an English woman tramps.

When Nelly B. repeated her evening prayers, she would insist upon reversing "Now I lay me down to sleep," beginning invariably, "If I should die before I wake, I pray the Lord my soul to take." Upon her mother's asking her why she didn't say it as she had been taught, and as the other children did, she replied with evident confidence in the correctness of her own logic, "How can He keep it before He takes it, I should like to know!"

The Worcester (Mass.) Transcript states that during the term of the Female Medical College, which has just closed in that city, there was much religious interest among the pupils. Out of the one hundred and one scholars, one-half were already members of churches, and of the remaining fifty, twelve were hopefully converted during the term, while many others left deeply interested.

A Frazer river correspondent writes to a California paper:—We had a splendid dinner on New Year's Day. This is the bill of fare: First course—bean soup. Second course—baked beans; then some baked beans, with *frijolis* plain; then fried beans, *frijolis guisados con manitas*. Desert—coffee and beans. After this sumptuous repast

we all adjourned to Sam Berry's whiskey battery and played bean poker for a sack of beans.

Pulpit Notices.—Nothing in the way of a practical joke has amused us so much, for a long time, as a dog notice that was given at the Orthodox church in Lancaster last Sunday. It may well serve as a burlesque on advertising all sorts of things from the pulpit. A notice was sent to the sexton—doubtless with the intention of having it posted on the meeting house—which by some mistake he was led to pass over to the minister. The officiating clergyman was a stranger, and when he came to read his notices he hesitated somewhat, but, after a preface to the effect that being a stranger he did not feel at liberty to decline reading what was given him, let off as follows: "All owners of dogs are hereby notified that if the same are not registered by the 1st of May, they will be killed, according to law." The effect on the congregation can be imagined.—Clinton Courier.

A correspondent of the Evening Post, writing from Madison, Ind., states that Delia Webster, of Kentucky slave stealing notoriety, has arrived in that place with some thirty families from Massachusetts, with the intention of starting a shoe factory on her farm, which is situated on the bluffs below Milton.

Butter Making in Holland.

FROM FLINT'S DAIRY FARMING.

It has been found by experience, that the flatter and shallower the pans, the quicker and better the cream rises. The milk-pots are pretty large, but are rather shallow than deep, glazed inside, of different forms, and different capacities; but they are always broader on the top than at the bottom, though they stand firmly on a round, broad foot-piece. Milk pans and pots are rinsed with cold water before the milk is poured into them. When properly cleaned and filled, they are placed on shelves made for the purpose, in regular rows. These shelves are only a few feet high above the floor of the cellar, and of suitable width; but, if there is not space enough for the milk, the pans are placed on the bottom of the cellar. The pots are also set along the walls, on firm broad shelves.

The milk-cellar, or rather the milk-room, in the North and South Dutch dairies, is placed on the north side of house, next to the kitchen, but a little lower than the latter, so that there are usually three steps down. The longer side, facing toward the north has one window, whilst the gable end, with its two windows, faces towards the west. The windows are generally kept shut, and are open only nights in summer. The cellar is either arched or covered with strongly-boarded rafters, over which the so-called cellar-chamber is situated. The floor of this room is laid in lime or cement, with red or blue burnt tiles, so that nothing can pass down through into the milk cellar. In the cellar itself are the above mentioned shelves and platforms for the milk-vessels along the walls, while outside, in front of the cellar, linden and juniper trees are planted, to prevent as much as possible the heat of the sun from striking upon the walls. Cleanliness, the fundamental principle of Dutch dairy husbandry, is carried to its utmost extent in the cellar. Barrels of meat, bacon, vegetables of every kind, and everything which could possibly create a strong odor and infect the air, or impart a flavor to the milk, butter, or cheese, are carefully excluded.

The vessels in which the milk is set remain standing undisturbed in their places, that the formation of cream may go on without interruption. Twenty-four hours, on an average, are thought to be necessary for the milk to stand, during which time the cream is twice taken off, once at the end of each twelve hours. The morning's milk is skimmed in the evening, and the evening's on the next morning. But the milk always remains quite still till the dairymaid thinks it time to skim, which she decides by the taste. Long practice enables her to judge with great certainty by this mode of trial.

When the cream is ripe it is taken off by the dairymaid with a shallow wooden skimmer, in the form of a deep plate, and carefully placed in a particular vessel—a bucket or cream-pot. The cream-pot is generally washed very clean, the staves very finely polished, striped with blue or white outside, and held together by broad brass or copper hoops, kept very bright. For closing the jar they use an ashcan cover, which is either simply laid on by a common handle, or sometimes held on by brass or copper hinges. Both cream-pot and cover are scoured white and clean. The cream remains there till enough is got for churning, or till it becomes of itself thick enough for butter. It is known to be of the proper consistency for butter when a long, slender, wooden spoon, thrust down into it, will stand erect. When in summer the cream does not get thick enough in season, they seek to hasten it by putting in a little butter-milk; but in winter the ripening of the cream is hastened by warming either by holding the cream-pot over a coal-pan, or on a hearth-plate.

Churning is the principal operation in the manufacture of butter, for by it the fatty particles are separated from the other constituents. There are several methods in Holland of effecting this separation of the

butter globules. The oldest and simplest is that of putting the cream into an upright churn, in which the cream is agitated by moving a long dasher, pierced with holes, up and down, till the object is accomplished.

As soon as the churning indicates that the butter particles increase in size and collect together, the motion of the dasher must be hastened till the butter has come together in a large mass. Great care should be taken to observe the appearance of this formation. The Dutch dairymaids acquire great skill, by long practice and experience, in judging of the proper moment when the separation of the particles has completely taken place. Very great importance is with justice attached to this skill, for it is undoubtedly true that one with this knowledge can get far more and better butter from milk of the same quality, the same quantity and skimmed at the same time.

The cream taken from the milk of thirty-five cows, after standing twenty hours, is generally churned in summer in less than an hour. In very hot weather the cream-pot is frequently set into the cool-bath of fresh water for five or six hours before the churning begins, and it churns the easier for it. Cold water is never poured into the churn with the cream. In winter, as well as in cold weather in spring and fall, warm water is sometimes poured in with the cream.

When the churning is finished, the dairymaid takes out the butter with a wooden scoop, and puts it into a tub for further working. The tub, is a broad, shallow vessel, open at the top, and having an opening at the bottom which is stopped by a bung. The scoop is pierced with holes, through which the butter-milk drains. The butter put into the tub is now rinsed, salted, and formed.

The tub is put upon a low, firm table, and the butter is worked by the hands, or by a shallow, rather wide and strong wooden ladle, until the butter is united into one firm and entire mass. Many dairymaids are accustomed to work the butter out from the middle towards all sides before bringing the whole mass together in the tub. Then very clear and pure fresh cold water is poured upon the butter, and worked through it till all the milky particles are entirely removed. After this is done in several workings, the bung is removed from the bottom of the tub, and the watery matter runs down through a little strainer. As a general rule, butter is washed with water and worked over eleven or twelve times; yet the operator must judge whether the butter contains any particles of milk, and must work with water till, as it runs off, it is no longer whitish, but perfectly clear. Butter sometimes becomes too soft from too much working, if it is all done at once; it is then worked over two or three times, and allowed to stand in cold water after each working, which preserves its hardness and texture. This whole operation is called the washing of the butter.

When the washing is finished, the butter is cut with a blunt, saw-toothed knife, in every direction, in order to remove all hairs, or fibres of any kind, which by any possibility have got into it during the day. It is then sprinkled over with white, finely-powdered salt, the quantity of which is regulated by the taste; and this is perfectly worked in, so that the whole is uniformly salted. Most dairymaids determine the quantity of the salt by the eye and taste, and acquire such facility by continued practice that they always get the proper quantity; but less experienced ones take the salt by weight. The salting is not done at once, but is continued three or four days, twelve hours intervening between each application, until all the salt has dissolved, and not a crystal is to be found. If the butter has a speckled and variegated appearance, it is a sign that the salt is not completely worked in, and the neglect must be remedied by working it over still more in the most thorough manner. When the salt is all dissolved, the butter is brought into single balls and got ready for the next market-day, or the whole mass is put into a particular keg, in order to be taken to market at some subsequent time as firkin-butter.

Household Recipes.

The Virtues of Borax.

The washerwomen of Holland and Belgium, so proverbially clean, and who get up their linen so beautifully white, use refined borax as washing powder, instead of soda, in the proportion of a large handful of borax powder to about ten gallons of boiling water; they save in soap nearly half. All the large washing establishments adopt the same mode. For laces, cambrics, &c., an extra quantity of the powder is used, and for crinolines (requiring to be made stiff), a strong solution is necessary. Borax being a neutral salt does not in the slightest degree injure the texture of the linen; its effect is to soften the hardest water, and therefore it should be kept on every toilet table. To the taste it is rather sweet, is used for cleaning the hair, is an excellent dentifrice, and in hot countries is used in combination with tartaric acid and bi-carbonate of soda as a cooling beverage.

To take out pitch, tar, resin, paint, &c., pour a little alcohol on the place, and let it soak in about half an hour. Then rub it gently, and you will find the alcohol has soaked out the glutinous quality, so that it will easily crumble out.

A Good Pickle for Butter.

A good brine is made for butter by dissolving a quart of fine salt, a pound of loaf sugar, and a teaspoonful of saltpetre in two quarts of water, and then strain it on the butter. Packed butter is most perfectly preserved sweet by setting the firkin into a larger firkin, and filling in with good brine, and covering it. Butter will keep sweet a year thus.

Buttermilk kept in potter's ware dissolves the glazing, and becomes poisonous.

Never scald strainers or milky vessels till thoroughly washed, as the milk or cream put in them will be injured by it. The best way to scald such vessels is to plunge them all over into scalding water, and then every spot is scalded.

Butter will sometimes not come because the air is too much excluded from the churn.

Nitrate of Potassa in Asthma.

Perhaps no remedy has been prescribed in severe cases of this distressing disease with more general success than the following: Immerse thick porous paper in a solution of nitrate of potassa, or common saltpetre, and hang it up to dry. At the approach of a paroxysm, allow the patient to inhale the vapor by burning it in a room, or smoking it in a tobacco pipe. We have several times prescribed it and in the majority of cases the relief it afforded was most magical. The solution of nitrate of potassa should be a saturated one; and after the paper has become dry it would be well to immerse a second time. A very good plan of filling the room with vapor, is to roll up a sheet of the proper size and place it in a candle stick. Ignite the end, and it will burn gradually and the vapor will be diffused throughout the room. It is easily obtained and well worthy a trial.—*Journal of Medical Science.*

Death to the Bugs.

The following remedy is said to be infallible.—Take two pounds of alum, bruise it, and reduce it nearly to powder; dissolve it in three quarts of boiling water, letting it remain in a warm place till the alum is dissolved. The alum water is to be applied hot, by means of a brush, to every joint and crevice. Brush the crevices in the floor of the skirting-board if they are suspected places; whitewash the ceiling, putting in plenty of alum, and there will be an end to their dropping from thence.

Graham Cake.

To one quart Graham flour add one teaspoonful salt, five table-spoons molasses, two table-spoons yeast, or a small yeast cake, stir as thick as pound cake. Let stand over night, if wanted for breakfast. When ready to bake, add a well beaten egg and a teaspoonful of soda. Bake in cups half an hour. They are excellent.

With a small camel's-hair brush rub the broken edges of glass or china with a little carriage oil varnish; and if neatly put together the fracture will hardly be perceptible, and when thoroughly dry will stand both fire and water.

For our Young Friends.**Miscellaneous Enigma.**

I am composed of twenty-nine letters.
My 9, 14, 8, 25, 10, 23, is what all farmers need.
My 2, 5, 22, 8, 18, 28, is a class of laboring men.
My 8, 13, 11, is a kind of tree.
My 15, 17, 28, 1, is a cape on the coast of Spain.
My 29, 21, 4, 19, is a measure.
My 23, 12, 6, 24, is a bay on the coast of Maine.
My 26, 19, 7, is a girl's name.
My 18, 16, 8, is what I had rather do than fight.
My 20, 6, 27, is an article of export.
My whole is a noble institution. D. S. J.
Flint, Mich.

Answer to Miscellaneous Enigma of last week—
THE BARON DE KALE. Answered by William Francis Craig, Detroit.
Answer to Enigma—Po-Ta-To.

GROVER & BAKER'S CELEBRATED FAMILY SEWING MACHINES.

495 Broadway, New York.
143 Jefferson Avenue, Detroit.
58 West Fourth Street, Cincinnati.

A NEW STYLE—PRICE \$50.

This machine sews from two spools, as purchased from the store, requiring no rewinding of thread; it forms, Fells, Gather and Stitches in a superior style, finishing each seam by its own operation, without recourse to the hand-needle, as is required by other machines. It will do better and cheaper sewing than a seamstress, and the same works for one cent an hour. Send for a Circular.

WHEELER & WILSON'S IMPROVED SEWING MACHINES.

Particular attention is invited to the
NEW STYLE AT \$50.00.

SEND FOR A CIRCULAR.**L. D. & H. C. GRIGGS,**

GENERAL AGENTS for Michigan and Western New York.

145 Jefferson Avenue, Detroit.

GOOD NEWS.—A reduction in the prices of Sewing Machines is announced in our advertising columns. Their utility is established beyond question, and at the present prices we see no reason why they should not be found, as they ought to be, in every household. Several varieties are manufactured, adapted to various purposes. So far as public opinion has been formed and uttered, the preference is emphatically accorded to the Wheeler and Wilson machine for family use, and for manufacturers in the same range of purpose and material. During the present autumn the trials have been numerous, and all the patents of any pretension have brought fairly into competition. In every case, the Wheeler & Wilson machine has won the highest premium. We may instance the State Fair of New York, New Jersey, Pennsylvania, Kentucky, Illinois, Wisconsin, Virginia, Michigan, Indiana, Mississippi, Missouri and California, and the Fairs in Cincinnati, Chicago, St. Louis, Baltimore, Richmond, and San Francisco. At the Fair of the St. Louis Mechanical Association, the Examining Committee was composed of twenty-five Ladies of the highest social standing, who, without a dissenting voice, awarded for the Wheeler & Wilson Machine, the highest only premium, a Silver Fitcher, valued at \$75. If these facts do not establish a reputation, we know not what can.—*Christian Advocate and Journal.*

SUFFOLK AND ESSEX PIGS FOR SALE.

THOROUGH BRED SUFFOLK AND ESSEX PIGS
for sale. For particulars, address
J. E. TIBBITTS, Nankin, Mich.

APPLE PIE MELON SEED, & C.

MAMMOTH PROLIFIC LIMA BEANS that grow only six feet high, rendering them very accessible, and completely under control, the vines being completely covered with bunches of from fifteen to twenty large pods to the bunch. 9 cents per package, mailed.
Also, LARGE CHEESE SQUASH, which is not surpassed in delicacy of flavor by any vegetable, and for pies cannot be excelled; flesh thick, close-grained, firm in texture, and rich cream color. 15 cents per package, mailed. Also, JAPAN APPLE PIE MELON 9 cents per package, mailed. THE THREE PACKAGES FOR TWENTY-FIVE CENTS. Address
C. V. RAPELTY,
Care of "Horticultural Monthly,"
Morristown, N. Y.

**FARM DRAINAGE!
A NEW BOOK,**

BY HON. H. F. FRENCH, OF NEW HAMPSHIRE.
AMERICAN Farmers are just awakening to the vital importance of this subject.
HERE IS THE BOOK TO GIVE THEM LIGHT!
Price \$1.00.

Sent by mail prepaid on receipt of price.
A. O. MOORE & CO.,
Agricultural Book Publishers,
140 Fulton Street, New York.

LANGSTROTH ON THE BEE!

An instructive and fascinating book!
Unequaled by any other work in any language.
A new and perfect system of Bee Culture.
Price \$1.25.

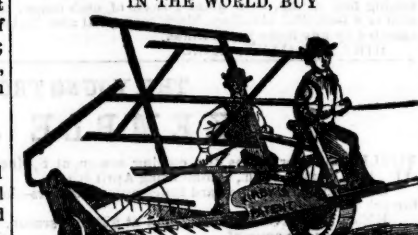
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140 Fulton Street, New York.

AGRICULTURAL BLACKSMITHING.

HUNTER & MOIR,
AGRICULTURAL IMPLEMENT MAKERS,
NORTHVILLE, Wayne Co., Mich., are prepared to make to order the latest and most approved style of SCOTCH IRON PLOWS, IRON and WOODEN HARROWS, SCOTCH GRUBBERS or CULTIVATORS with three wheels, also single cultivators—all of wrought iron. All communications promptly responded to, and all orders filled with dispatch.
HUNTER & MOIR,
Northville Wayne Co., Mich.

TO FARMERS!

IF YOU WANT THE BEST
COMBINED MOWER AND REAPER
IN THE WORLD, BUY

**KIRBY'S
AMERICAN HARVESTER**

WITH ALL THE IMPROVEMENTS FOR 1859.

It was awarded the First Premium as a COMBINED REAPER AND MOWER at the Indiana State Fair in September 7 and 8, 1858, (the only State Fair that occurred last year), and at nearly every other trial in which it was engaged.

**MANUFACTURED BY
BUFFALO AGRICULTURAL WORKS,
Buffalo, N. Y.**

It was patented in 1856 and only seven machines made in that year, which were put in the hands of experienced practical farmers and thoroughly tested. They were so successful as to induce parties to engage largely in their manufacture, under the immediate supervision of the inventor.

In 1857 two hundred were made and sold to practical men, everything giving unqualified satisfaction, demonstrating them to be the best combined machines ever used, answering equally well as a Mower or Reaper, and working satisfactorily in rough or smooth, in wet or dry fields, as in standing or lodged grass or grain. There are now three large factories making these machines and turning out many thousands. It has proved itself to be the most simple, durable and efficient machine before the public. As a COMBINED MACHINE it stands unrivalled. Surpassing the best single mower as a mower and the best single reaper as a reaper.

The following are some of its points of superiority:

The Lightest Machine in Use.

The Mower weighing only six hundred and thirty-nine pounds, and the Reaper eight hundred and eight pounds.

Lightest Draft—No Side Draft.

Requiring one-third less draft than any other machine, as numerous tests with the Dynamometer, and the testimonials of farmers abundantly show.

Strongest and most Durable Machine.

Being all IRON, except seat, pole and platform, and the weight so distributed as to give the greatest amount of strength with the least weight of iron. The Castings are made of Saluberry iron, and the finger bar is of wrought iron, with a flange on the front edge, thus giving it great strength with light weight.

No Pressure upon the Horse's Neck.

The weight of the driver counterbalancing the weight of the front of the frame, and throwing the whole upon the driving wheel.

Self-Adjusting Finger Bar.

In this respect it is entirely unequalled by any machine yet produced. The finger-bar works up and down independent of the driving-wheel, enabling it to go through dead furrows and ditches, among stones and bogs, and over knolls and hills, where no other machine can follow it. It can also be set to work at any height from two to eighteen inches, and the change can be made in an instant, thus adapting it to all kinds of work, whether mowing or reaping, or gathering grass or clover seed.

A Perfect Combined Machine.

Working equally well whether mowing or reaping, and the best single reaper as a reaper.

Raker's Position Easiest Possible.

In this point it surpasses all reapers; the raker's position enabling him to deliver the gavel at the side with but one movement of his arms, which is as natural and easy as if he were standing on the ground and raking.

Easily Managed and Operated.

By means of a lever the driver can at pleasure throw the cutters out and in gear; by another lever he can raise either end or both ends of the finger-bar to pass over obstructions, or move from field to field; the change from mow to reaper is easily and quickly made; the oil boxes, bolts, screws, and nuts, are easily accessible.

Perfect in all Minor Points.

It cannot be clogged; has no side draft; is marvelously simple in construction, and not liable to get out of repair; is made of the best materials, and the workmanship and finish superior to any other machine in the country.

The Lowest Priced Machine in Market.

The price of the Mower at Factory being only \$105, and the Combined Machine \$125; One Horse Mower \$90, and One Horse Combined Machine \$110.

For sale by local agents in nearly every county in the State of Michigan.

For further information address L. J. BUSH,
Toledo, O.

General Agent for Michigan, Wisconsin and N. W. Ohio
17-9w

**WE KEEP CONSTANTLY ON HAND THE
different kinds of Drain Tile, at
PENFIELD'S, 108 Woodwnd avenue.****Horse Powers, Threshers and
Cleaners!**

PITTS & 10 HORSE, EMERY'S 1 AND 2
Horse (tread) Powers, Pease's Excelsior Powers,
Corn and Cob Mills, Corn Mill and Feed Mills, Flour
Mills, Cross-cut and Circular Saw Mills, Leonard Smith's
Saw Machines. D. O. & W. S. PENFIELD,
No. 108 Woodward Ave., Detroit.

1859. SUMMER ARRANGEMENT. 1859.

MICHIGAN SOUTHERN AND DETROIT, MONROE and TOLEDO RAIL ROAD.

On and after Monday, April 18th, 1859, Passenger
Trains will run as follows:
Leave Detroit for Adrian and Chicago at 6.45 A.M. and
5.00 P.M.

Arriving at Adrian at 9.57 A.M. and 10.00 P.M.
Chicago at 7.00 P.M. and 7.00 A.M.

For Monroe, Toledo, Cleveland, Cincinnati, Buffalo
and New York: Leaves Detroit at 6.45 A.M. and 1.00 P.M.
Arrives at Monroe at 8.88 A.M. and 8.20 P.M.

Leaves Toledo at 8.85 A.M. and 4.30 P.M.
Toledo at 10.15 A.M. and 5.20 P.M.
Arrives at Cleveland at 8.10 P.M. and 9.20 P.M.

From Chicago for Detroit:
Leaves Chicago at 4.00 A.M., 8.00 A.M. and 8.00 P.M.
From Cleveland for Detroit:
Leaves Cleveland at 4.00 A.M., 11.25 A.M. and 6.20 P.M.

Toledo at 4.10 P.M., 10.35 P.M.
Trains arrive at Detroit from Chicago, Adrian, Cleve-
land and Toledo at 1.35 A.M., 12.15 P.M. and 7.15 P.M.

CONNECTIONS:

The 6.45 A.M. Train from Detroit makes direct connection
at Adrian, with Express Train for Chicago and Jack-
son. Arriving in Chicago at 7.00 P.M., in time to connect
with the Trains of all Roads running west of Chicago;
and at Toledo with Express Train for Cleveland—arriving
in Cleveland at 8.10 P.M., making direct connection
with Express Train for Buffalo and New York; arriving
in New York at 1.20 P.M., and with the Express Train
for Pittsburgh.

The 1.00 P.M. Train connects at Toledo with Express
Train for Cleveland, Buffalo, and New York, arriving
in Cleveland at 9.20 P.M. and New York at 9.30 P.M.,
next evening, and with Express Train for Pittsburgh.
The 6.00 P.M. Train, connects at Adrian with Express
Train for Chicago—arriving in Chicago at 7.00 A.M.

The 6.20 P.M. Train from Cleveland, and 10.35 P.M. Train
from Toledo, arrives in Detroit at 1.35 A.M.
Making direct connection at Detroit with Express Train
on Great Western Railway for Suspension Bridge and
Niagara Falls.

The 11.25 A.M. Train from Cleveland; the 6 A.M. Train
from Chicago, via Adrian; and the 8 A.M. Train from
Adrian, via Toledo and 4.30 P.M. Train from Toledo,
makes direct connection at Detroit with Express Train
on Great Western Railway for Suspension Bridge and
Niagara Falls, leaving Detroit at 8.00 P.M.

Direct connections are also made, at Detroit with the
Detroit and Milwaukee Railway.
Sleeping Cars accompany the Night Trains between
Adrian and Chicago.

No change of Cars between Detroit, Adrian and Chicago.

JNO. D. CAMPBELL, SUPERINTENDENT.
L. P. KNIGHT, Agent, Detroit. 7-1f

FARMERS OF MICHIGAN!

Who want to purchase

AGRICULTURAL TOOLS

AND

IMPLEMENTS!

As you would secure your own interests, get the articles
manufactured by

WATERS, LATHROP & McNAUGHTON,
In the City of Jackson.

Waters, Lathrop & McNaughton

Make the

MOST DESIRABLE KINDS

of Farming Utensils, and the

BEST OF THE KIND.

Among their manufactured articles are found the best

Cultivators, Harrows,

and

POTATO DIGGERS

Of different patterns, also,

PLOWS and ROAD SCRAPERS,

STORE TRUCKS

For Stores and Granaries. Every Storekeeper and every
large Farmer wants one.

The Best Harvesters

In the country, and

THRESHING MACHINES.

With Separators or without them. Their Harvesters are

Allen's Combined Mower and Reaper.

AND

Allen's Mowing Machine.

(R. L. Allen's patent, New York, with his very latest
improvements.) The

Buckeye Mower and Reaper.

AND

Aultman & Miller's Mowing Machine.

(C. Aultman, of Canton, Ohio)

These are undoubtedly the best two Harvesters and
Mowing Machines for either rough or smooth ground,
wet marsh or dry meadow, and for standing or fallen
grain. The farmer who uses either of these need desire
nothing more in that line. Also a superior

REVOLVING HORSE RAKE,

With sixteen teeth, being the greatest labor saver known
on any farm. The very best

Grain Cradles, Scythes, Scythe Snaths,
Horse Rakes, Gigg Rakes,
Hand Rakes, &c.,
Including

THE CELEBRATED MORGAN CRADLE & SCYTHE
THE CELEBRATED MULLEN SCYTHE SNATH,
THE "EXCELSIOR" SCYTHE SNATH,
BUSH SNATHS, WITH TWO HEEL RINGS,
AN IMPROVED HORSE POWER,
For one or two horses, and a perfect charm of a

DOG POWER.

For Churning, Washing, &c.

Water's Superior Grass Scythe.

This Scythe, of rolled and polished Steel, is beyond a
doubt the NE PLUS ULTRA in the line of a Grass
Scythe. No mower who has ever used one, would give it
for one of any other kind.

GOOD AND CHEAP STRAW CUTTERS.

All the desirable varieties of SHOVELS, SPADES,
SCOOPS, HOES, TOOLS, RAKES, POTATO HOOKS,
and FARMING and GARDEN TOOLS generally, and
all sorts of TOOL HANDLES.

WATERS, LATHROP & McNAUGHTON,
15-18w Jackson, Mich.

LAWTON BLACKBERRIES FOR SALE

At the rate of \$2.00 per dozen, or \$10.00 per hundred
HUBBARD & DAVIS,
Fort Street, Detroit

SEEDS, SEEDS!

FRESH SHAKER SEEDS, of LAST YEARS
growth and warranted. Also, Spring Wheat, Sweet
Potatoes of several kinds, King Philip, Flour, Dutton
Eight Rowed and Sweet Corn, Timothy, Clover, Barley
Peas, &c., at
PENFIELD'S,
108 Woodward Ave., Detroit.

Dr. H. BIGELOW, OCULIST,

(Office, Room No. 9, Sheldon
Block, opposite the Peninsular
Bank, Jefferson Ave., Detroit,
Mich.) respectfully announces
to the public generally that he
is now engaged in treating the
various diseases of the Eye,
with much success. Many cer-
tificates and recommendations
might here be given, but such
things are so common at this day, that it is deemed
merely to say to those afflicted, COME AND SEE.
His treatment is the same as that practiced by the late
Dr. George Bigelow.

18-1w

THE IMPLEMENT FOR GARDENS.**THE HAND SCARIFIER.**

PRICE \$3.50.

WE offer for sale the Hand Scarifier, the most desir-
able and useful implement for gardens, of any that
has been invented, and the most perfect labor saver.
Read the testimony of those who have tried it last
season.

ROCHESTER, OAKLAND, CO., MICH., FEB., 1859.

MESSES. BLOSS & ADAMS:

You cannot recommend too highly your Hand Scar-
ifier. It is an invaluable machine for cultivating all root
crops sown in drills. It works easy, a boy of 12 years old
can use it and do more work than five men can with hoes
in the same time. It pulverizes the surface of the ground
and kills all the weeds. I had one the last season and
speak from experience. A person having a quarter of an
acre of garden to cultivate should not be without one and
no farmer or gardener after using one a single hour
would be without one for four times its cost.

W. JENNINGS.

ROCHESTER, OAKLAND, CO., MICH., FEB., 1859.

MESSES. BLOSS & ADAMS:

In answer to your inquiry, "How we like the Hand
Scarifier," we reply that we are highly pleased with it.—
It is the greatest labor saving machine for its cost that
we have ever used, or seen. For all root crops sown in
drills it is invaluable. One man with this machine can
do more work in one day than five men with hoes, and do
it better. We have used it two seasons and would rather
pay twenty dollars for one than do without it.

Yours respectfully,

JULIEN ADAMS.

These implements are for sale, by the subscribers at
their seed store,
J. B. BLOSS & CO.,
No. 22 Monroe Avenue, Detroit.

THE GREAT PREMIUM MOWER.

THE AULTMAN AND MILLER

MOWING MACHINE.

BUGEYE MOWER.

AULTMAN & MILLER'S
PATENT.

PATENTED BY C. AULTMAN & L. MILLER.

To which was awarded the First Premium,
a Gold Medal and Diploma, at the
Great National Trial at
Syracuse, N. Y.,
July, 1857.

MANUFACTURED BY
C. AULTMAN & Co.,
Canton, Stark County, Ohio.

After tolling and experimenting for many years, we
have finally succeeded in getting up a machine that is per-
fectly adapted to cut both Grain and Grass. The public
are already aware that we have been manufacturing a
Mowing Machine that has been unrivalled in any market.
But the Farmer wants a machine that will cut both grain
and grass, provided he can get a combined machine that
will mow as well as a machine made expressly for
mowing; and reap as well as a machine made expressly
for reaping. These we furnish in our New Machine.

First.—We have a perfect Mower, having several ad-
vantages over all other Mowers, and no disadvantages,
which will be readily seen by examining some of its
points of excellence.

Second.—We have a perfect Reaper, which has all the
advantages of a single machine, and the only true way of
delivering the grain at the side of the machine.

We have a cutter bar and platform for cutting grain,
independent of the Mower, so that in changing the Mow-
er into a Reaper, we just couple the cutter bar at the
hinge and couple the Reaper platform which renders the
machine complete for Reaping Grain.

In having two cutter bars, one for grass and the other
for grain, each is perfectly adapted for doing the work it
is designed to do, and the great tendency to jam, heretofore
existing in combined machines, in having the cutter
bar either too long for grass or too short for grain.

This machine has been thoroughly tried, both in grass
and grain, having had a number in use the past harvest.

The following are some of its points of excellence as a
Mower:—

1st. It has not one pound of side draft.

2d. It has no more weight on the tongue, or horses' neck, than a wagon.

3d. Its draft is only 275 pounds—so reported by the
Committee at the Ohio State Fair, 1857.

4th. It runs on two wheels which serve as drivers.

5th.

MICHIGAN FARMER.

R. F. JOHNSTONE, EDITOR.
Publication Office, 130 Jefferson Avenue.
DETROIT, MICHIGAN.

S. FOLSON,
WOOL DEALER,
90 Woodward Avenue,
DETROIT, MICHIGAN.

THE MARKETS.

Flour and Meal.

In New York, May 5, "the inquiry for western canal flour early in the day was limited, but towards the close the demand improved, and for good brands holders were able to establish a further advance, but spring wheat brands were quite dull; choice brands are held with great firmness, and are in reduced supply; the sales are 12,300 bbls., at \$5.25a\$5.75 for superfine state; \$5.90a\$6.05 for choice do.; \$6.45a\$6.65 for extra do.; \$6.40a\$6.70 for low grades of western extra.

"The demand for wheat is less active, but prices are rather higher; the advanced prices asked checked business; the sales are 3,500 bush. red western at \$1.50a1.52; 500 bush. prime Milwaukee club at \$1.25; 5,300 bush. inferior Chicago spring at 90c., and, within a few days, 17,000 bush. very inferior do. at 75c.70c.; 400 bush. prime white southern at \$1.31; and 600 bush. ordinary white Kentucky at \$1.75. Rye is better and in fair demand; sales of 3,300 bush. at 83c., and 1,100 bush. choice at 93c.,—an extreme rate. Barley is holding with more firmness, and is in good demand; sales of 17,400 bush. at 60c. for inferior state, and 75c. for good. Oats are in brisk demand, and prices better; sales of state at 56a57c., and western and Canadian at 63a64c. Corn is better, but closes dull at our inside figures for mixed; the arrivals are fair; sales of 27,460 bush. at 56a57c. for western mixed."

"The Detroit market is very firm, the advance last noted being more than maintained. The markets elsewhere are advancing, and there is no telling where it will stop. Yesterday afternoon 95 bbls spring sold at \$5.52a5.53; 50 bbls choice extra at \$5.75; 75 bbls extra at \$6.02a6.03; 150 bbls spring wheat at \$5.62. To-day 80 bbls XX sold at \$7.00; 50 bbls No. 1 extra at \$6.75; 20 bbls super at \$6.25; 60 bbls by the day sold at \$6.55a7.00.—Two or three retail parcels XX also sold at \$7.12a7.25, which are extreme figures even for small lots of that quality, but probably will not long be so considered.—About 700 bbls flour arrived to-day from Cleveland by steamer for parties here.

"Wheat—Nothing doing from store, buyers and sellers being apart in their views. White held firmly at \$1.50; standard spring \$1.18. Prices from wagons are improving, millers now offering \$1.40a1.45 for white and \$1.35 for red.—Detroit Tribune.

Corn is very scarce, and holders have generally advanced their views to 81a82c.

Oats are quiet at 50a55c. No sales reported.

Meal is held as heretofore, at \$1.62a1.75 for both coarse and fine.

Live Stock, &c.

There has been a little advance in the beef and mutton market for the past week. Butchers represent cattle as plenty but held at high figures. Wm. Smith bought fourteen head of U. Durham at 4 1/2 per cwt., fifty sheep from B. Collins at \$6.35 each, and six lambs at \$1.75 each. There is not much doing in hogs; good ones are taken at 7 cents.

The New York papers speak in most disparaging terms of the quality of western cattle brought to that market this spring. The Tribune says that two-thirds of those from Illinois are "the most abominable scallwags" ever offered for meat, and that the "working oxen are so poor that a decent farmer would be ashamed to put them in a yoke."

Among those in market from Michigan, we note Clark & Vail with 48 head, S. S. Woodruff 28 head, and W. D. Paige 41 head.

The prices range:
First quality..... 11a11 1/2
Medium..... 9a10 1/2
Ordinary..... 8a9 1/2
Some extra good heaves may be quoted at 12a11 1/2
The general average of the market at..... 10a11
The most of the sales range from..... 10a11

Owing to the large demand for shipment, potatoes have advanced materially. Meshanocks are quoted at 70a75c, common sorts at 55a60c.

Butter is quiet at 16a20c. The supply exceeds the demand.

Eggs—But little doing at 11a12c.

Wool.

S. Folsom, wool dealer in this city reports the market dull. During the past week he has purchased 3,000 lbs., at 45 cents, and 1,800 lbs., at 46 cents. Prices ranging from 39 to 46 cents per lb.

The eastern markets show a general tendency downward and of course our own follows it.

Boston.—The market is quite firm for fleece with a reduced stock and a fair demand, but pulled wool is dull and prices still rule in favor of buyers. The sales comprise 100,000 lbs. fleece and pulled at prices in the range of quoted rates, including a lot of 40,000 lbs. fine fleece at 60c per lb.

PHILADELPHIA.—The market has been very quiet, the manufacturers generally, both here and at the Eastward, being well supplied. Some holders are rather more anxious to realize, and in some instances an abatement in prices has been acceded to. But little change from the present apathetic condition of the market can be looked for until supplies of the new clip commence to come forward.

The weeks sales only reach 40,000 lbs., among which we notice the following: 3,000 lbs. fine at 58c.; 3,500 lbs. at 47c. 48c.; 1,500 lbs. common and 1/2 blood 45c. 46c.; 3,000 lbs. unwashed 37 1/2c., all cash.—Cm. Lst.

PROVIDENCE.—The market is still dull and drooping. The sales for the week have been limited: 23,000 lbs. fleece at 37 1/2c. 38c.; 2,000 lbs. pulled at 40c. 41c., a small lot of foreign at 38c., and 5,000 lbs. selections from choice clips at 60c.—Journal.

New York, May 5.—The demand for domestic is quite limited, but prices are without further change; the decline in fleece is about 5c. from the highest range, and in pulled 7c.; the former is now in meagre supply, and all the old stock in the market will be wanted (before the new clip is available), at full prices, say 50a55c. for good to choice State Saxony; and 57a62 1/2c. for good to choice Pennsylvania qualities. Felled is in good supply, but it has come to market in poor condition, and buyers are timid purchasers of whole parcels, unless at lower rates; there is little or none here now that would command over 52c.; the sales of fleece do not aggregate over 30,000 lb., in small lots, at 43a50c. for one-quarter to full blood, and 55a60c. for good to choice Saxony; 30,000 lb. pulled sold at 39 to 40c. for No. 1 city and extra country. California has recently come forward in very poor condition, and the result is that owners have been obliged to accept lower rates in order to realize; sales of some 550 bales common to fine have been made at from 10 to 25c., as to quality. Foreign is less active, and a decline of 5a10 c. may be quoted on the inferior qualities since the auction of the 21st ult. That sale had an injurious effect on our market, as the men represented there were intelligent ones of New England, who wanted no information from dealers or dead dogs to post them on the State of the New York market.

MT. VERNON BLACK HAWK.

SELIM.

THIS well known stock horse can be found for this season at the Hodge Horse Stable, Pontiac, Tuesday; at the farm of the subscriber, Thursday; at the Stable of the American Hotel, Rome, Saturdays.

Pedigree:

Sire, Ticonderoga, [or Felton Horse]; g. sire, Hill's Old Black Hawk; g. g. sire, Justin Morgan. Dam, descended from Messenger.

Within two years this horse has received seven First prizes. First premium for all work and diploma against Foreign Horses at the last Michigan State Fair.

The others at County Fairs. His stock received First Premiums at the Michigan State, and Macomb and Oakland County Fairs last fall.

His colts, many of them have sold for large prices. E. D. Bush Esq., of Sh. reham, Addison Co., Vt., one of the best horse breeders in the State, in a letter dated January 10, 1859, says: "I have just sold a mare four years old last spring, bred by Mr. S. Root, Westport, N. Y. sired by your horse, Selim, for \$1,425 cash. She was jet black, stood 15 1/2 hands high and could trot fast."

TERMS: By Season \$10.00—to insure with foal \$15.00. Good pasturage at the farm of the subscriber at fifty cents per week. All accidents and escapes at the risk of the owner. E. R. SMITH, Jr., Mt. Vernon, Macomb Co., Mich., April, 1859. 17-5v

1859.

THE CLEVELAND WOOL DEPOT

Has been established over six years, and it affords the subscribers much satisfaction to know that its merits are fully appreciated by those who have patronized it during this entire time. The change made one year ago in containing its sales to cash only, met with universal favor. It is proposed to continue the cash system, and future consignors may rely upon the same prompt return which characterized our last year's business. Perhaps not quite as high figures can be obtained by adhering strictly to cash, but it will insure prompt returns, and hundreds have assured us that they obtained from *five* to *ten* cents a pound more through the Depot than they were offered last Spring from other sources, and we believe this has been true every year excepting a few of the consignments during the Fall of 1857. It should, therefore, no longer remain a question in the minds of

Wool Growers or Merchants having Wool to dispose of, that this system of closely classifying and handling will prove the very best manner of selling wool which has yet been adopted. Sacks will be sent as heretofore to those who may order.

To those wishing to realize on their wool as soon as shown, advances will be made

AMOUNTING TO THE VALUE OF THE WOOL.

PROVIDING THE CONSIGNORS WILL ALLOW THEM OFFERED FOR SALE AT THE FIRST OR EARLY PRICES.

Cash advances will be made on receipt of Wool or Shipping Bill, as formerly.

We trust that the liberal Cash advances, the long experience in the Depot business, and established reputation of our grades among manufacturers, with undivided attention to our consignors' interests, will insure us a liberal patronage. GOODALE & CO., 16-2w Cleveland, Ohio.

THE CELEBRATED MORGAN HORSE BUSSORAH!

B. J. BIDWELL, would announce to the people of Tecumseh and vicinity, that he has yielded to the earnest solicitations of the breeders of fast trotting horses of Lenawee county and State of Michigan, to offer the services of his fast trotting stallion one season more at his old quarters in the village of Tecumseh.

Terms of service made known on application. This season will be the last opportunity given in this country for the services of this noble horse. He will be taken south for a full season, and probably remain there. His colts can be seen here from a sucker to a four year old.

Breeders of good horses are invited to call and examine his progeny.

PEDIGREE:

BUSSORAH was sired by General Gifford; g. sire, Gifford; g. g. sire, Woodbury; g. g. g. sire, Justin Morgan of Vermont, he was by True Britten, he by Morton's Traveller Imported, he by the celebrated O'Kelly or English Eclipse, he by King Herod, by Blank, by Old Cade, King Herod was by Tartar, his dam by Cyron by Blaze a son of the great Flying Childers. Blank was by Gololphin Arabian. Justin Morgan's dam was by Diomed he by the Church Horse, he by imported Wildcat. She was a fast trotter. The dam of Bussorah was the justly celebrated Lady Howland, by the imported Arabi an horse, Bussorah; grand dam, by the old imported Messenger. Lady Howland was a fast trotter. He is a beautiful bright bay, 15 1/2 hands old, 15 1/2 hands high, weight 1130 lbs., possessing all the fire and docility of the Arabian horse, and the hardiness of the thoroughbred English horse. He is distinguished for his beautiful Arabian head, large expressive eyes, extended nostrils his fine and finely set on neck, his oblique and lengthened shoulders, ample and muscular quarters, his clean flat rgs, capacious chest round barrel shaped body, broad loins, short back, deep and full flank, fine coat and prominent blood veins, giving unmistakable evidence of the pure and high blood animal. B. J. BIDWELL, Proprietor.

We, the undersigned, do hereby certify that we are acquainted with the above named horse and his pedigree; he is truly represented, and we have examined his colts and find them very fine, possessing the characteristics of the Morgan horse in a high degree, and well for high prices. We most cheerfully recommend him to all breeders of fine horses for all purposes.

C. W. Ingersoll, D. L. Case, D. H. Emans, of Lodi, Seneca county, N. Y.; Eber Adams, G. L. Belden, of S. Wilcox, Adrian city; S. Davidson, A. J. Hunter, C. De Mott, Tecumseh.

J. L. HURD & CO.

Produce and Shipping Merchants

Agents and Consignees for the following Lines:

AMERICAN TRANSPORTATION COMPANY.

CAPITAL \$900,000.

WESTERN TRANSPORTATION COMPANY.

CAPITAL \$900,000.

AND THE NEW YORK CENTRAL R. R. Co.

We would respectfully announce to the Millers, Merchants and Manufacturers of Michigan, that the recent reduction of Canal Tolls on the Erie Canal, will enable us to carry eastward, from Detroit,

FLOUR, WHEAT, CORN, OATS, WOOL, ASHES, HIDES.

And all other products of Michigan, at prices much below those of former years. Our lines are THE MODEL LINES OF THE COUNTRY.

J. L. HURD & CO., Foot of Second-st.

FURNITURE WAREHOUSE,

ON JEFFERSON AVENUE,

BELOW MICHIGAN EXCHANGE, DETROIT.

The subscribers keep constantly on hand a large stock of

ELEGANT FURNITURE,

Both Modern and Antique Styles; in Rosewood,

Mahogany and Domestic Wood.

Those wishing rich and fashionable furniture, will always find a great variety to select from—equal in every respect to anything in the Eastern market. Being in constant receipt of Pattern Pieces from the

FASHIONABLE MAKERS IN NEW YORK,

they are enabled to guarantee the most Perfect Satisfaction to their customers.

They also keep constantly on hand a large and complete assortment of Plain Furniture of Mahogany, Cherry and Walnut. In short, every article in the line of Household Furniture will be found in their Stock, including Chairs of every style and price, from four shillings to sixty dollars each. The subscribers now have on hand, and make to order, best

HAIR MATTRESSES.

Their customers can rely upon getting a genuine article CORN-BLANK MATTRESSES & STRAW PALLIASES constantly on hand. For the trade we keep constantly a large stock of Mahogany and Rosewood Veneer.

STEVENS & ZUG.

BURNHAM & Co., Dealers in all kinds of Agricultural Implements, Garden and Field Seeds, Salt, Plaster, Coal, Water and Stone Lime, Storage and Commission. Warehouse near Rail Road Depot, Battle Creek, Michigan.

G. S. STERLING, D. R. BURNHAM.

AYER'S CHERRY PECTORAL

HAS won for itself such a renown for the cure of every variety of Throat and Lung Complaint, that it is entirely unnecessary for us to recount the evidence of its virtues, wherever it has been employed. As it has long been in constant use throughout this section, we need not do more than assure the people its quality is kept up to the best it has ever been, and that it may be relied on to do for their relief all it has ever been found to do.

AYER'S CATHARTIC PILLS,

For all the Purposes of a Purgative Medicine.

FOR COSTIVENESS;
FOR THE CURE OF DYSPEPSIA;
FOR JAUNDICE;
FOR THE CURE OF INDIGESTION;
FOR HEADACHE;
FOR THE CURE OF DYSENTERY;
FOR A FOUL STOMACH;
FOR THE CURE OF DYSPEPSIA;
FOR THE CURE OF SCROFULA;
FOR ALL SCROFULOUS COMPLAINTS;
FOR THE CURE OF RHEUMATISM;
FOR DISEASES OF THE SKIN;
FOR THE CURE OF LIVER COMPLAINT;
FOR DROPSY;
FOR THE CURE OF TETTER, TUMORS AND SALT RHEUM;
FOR WORMS;
FOR THE CURE OF GOUT;
FOR A DYSPEPSIA;
FOR THE CURE OF NEURALGIA;
FOR PURIFYING THE BLOOD.

They are sugar-coated, so that the most sensitive can take them pleasantly, and they are the best aperient in the world for all the purposes of a family.

Price 25 cents per Box; five Boxes for \$1.

Great numbers of Clergymen, Physicians, Statesmen, and eminent persons, have lent their names to certify the unparalleled usefulness of these remedies, but our space here will not permit the insertion of them. The Agents below named furnish gratis our AMERICAN ALMANAC in which they are given; with also full descriptions of the above complaints, and the treatment that should be followed for their cure.

Do not be put off by unprincipled dealers with other preparations they make more profit on. Demand AYER'S, and take no others. The sick want the best aid there is for them, and they should have it.

Prepared by Dr. J. C. AYER,

PRACTICAL AND ANALYTICAL CHEMIST,

Lowell, Mass.

All our remedies are for sale by J. S. Farrand, Detroit, and by all Druggists every where. may8m



FOR SALE

AT THE

AMERICAN SEED STORE

22 Monroe Avenue, Detroit, Mich.

PEABODY'S PROLIFIC CORN!

A NEW VARIETY.

It grows from three to ten ears on a stalk. Six ears per bush by J. W. Shaw, last year, produced one hundred bushels of sound corn. This corn was originated by a careful scientific cultivator on Long Island. It comes up stout and is more forward than common corn. Plant two kernels in a hill, four feet apart each way.

PRICE—Fifty cents per quart, or Fifteen cents per ear.

HUNGARIAN GRASS SEED!

100 BUSHELS FOR SALE.

This justly celebrated Grass Seed has been raised for two years in Iowa and Wisconsin, and to some extent in Illinois and Michigan, the past season. All who have raised it, invariably find it unequalled to the same. In some cases as high as seven, and rarely under four tons to the acre of a most healthy and nutritious Grass. It yields from 25 to 40 bushels of seed to the acre, which makes good feed for horses and cattle. They not only eat it with great relish, but it keeps them in more healthy and better condition than any feed yet tried.

PRICE—\$3 per bushel.

We subjoin the following

Testimonials:

OTTUMWA, IOWA, Jan. 22, 1859.
To whom it may concern:—This is to certify that crops of Hungarian Grass were entered for premiums at our Agricultural Fair last fall, varying from five to over seven tons to the acre of hay, and thirty-seven bushels to the acre of seed, and made no mistake in giving the same. This section of country was visited by severe drouth the fore part of last season, so that the crop of Timothy was scarcely worth harvesting, yet the Hungarian was good, averaging not less than four tons to the acre throughout the country. Its qualities for feeding are spoken of in high terms by all who have used it.

L. D. MORSE,

Secretary of Wapello Co. Agricultural Society.

SALINE, MICH., Jan. 1859.

Mr. J. J. Lyon, Sir:—In reply to your question asking how I like the Hungarian Grass, I will say that it is the best thing I have ever raised for feeding stock, and I shall not raise any other hay hereafter. It cannot be too highly recommended.

Yours,

SAMUEL ROBINSON.

Mr. Irwin Peck, of Ypsilanti, says that "Farmers had better plough up their Timothy meadows and sow the Hungarian Grass, as ten acres of it is worth more for stock purposes than twenty acres of any other hay."—Farmers who have not tried it, unite in giving the same testimony relative to its merits, as do Messrs. Robinson and Peck.

This unrivalled Grass has been raised in several counties in the State of Michigan, the past season, by some of the most expert Farmers in the State, who recommend it as surpassing all other crops for stock purposes. Some have raised as high as four tons of excellent hay and thirty bushels of seed to the acre, although the season was very unfavorable for it. Try it, farmers, once, and you will never regret it. Sow at any time between April 1st, and July, at the rate of one bushel to three acres.

The few farmers named below, are among the many who have raised it, and can testify as to its qualities: J. I. Peck, Ypsilanti; S. Howell, Saline; Mathew Howell, Saline; Samuel Robinson, Saline; F. & Zeno Comstock, Raisin; L. Vanakin, Ypsilanti; J. B. Lapham, Manchester; D. D. Tooker, Napoleon; S. A. Cady Wayne; A. Guiley, Wayne; L. Terrill, Plymouth; A. Cook, Plymouth.

BLOSS & CO.,

No. 22 Monroe Avenue, Detroit.

RAY'S SECRET OF HORSE TRAINING

With a fine Portrait, Price 25 cents and sent free of postage, send orders to O. A. ROEBACH, Jr.

15-15w 245 and 248 Broadway, New York.

IMPORTED STONE PLOVER!

THE HIGHEST AND BEST BRED BLOOD HORSE IN AMERICA,

IS OFFERED TO THE BREEDERS OF MICHIGAN and other States at the very low price of THIRTY DOLLARS the season; all fees to the groom included.

The second season for this horse in this State commenced on the first of April, and will end with the 30th of July. He will stand at Cooper's Corners, two miles from Plymouth, Wayne county, Mich.; 10 miles from Ann Arbor; 10 miles from Ypsilanti; 18 miles from Dexter, and 22 miles from Detroit.

Mares sent from a distance will be taken and kept on the usual terms, but the subscriber will not in any case be responsible for accidents or escapes, should any occur.

Terms.—The money for service to be paid at time of first trial, or an approved note to be given for the amount.

Pedigree and Description.

STONE PLOVER was bred by the Right Honorable Earl Spencer, and was foaled in the spring of 1850, and was sold to Count Bathany at his annual sale of yearlings in 1851, and was never out of the possession of the Count until sold to the present owner, who made one season with him in England, previous to his importation.

This horse was sired by the renowned Cotherstone, winner of the Derby, out of Wynneck, by Slane, the sire of Merry Monarch, winner of the Derby, and Princess, winner of the Oaks, and also of many other distinguished winners. Cotherstone was bred by the celebrated Mr. Bowes, and was by Touchstone, out of Emma, by Whisker, the being the dam of imported Trustee. Whisker was of the most celebrated family in England for stoutness, he being own brother to Whalebone, Wolf, Wire, all winners and the sires of winners, at long distances. Touchstone was a grandson of Whalebone.

Stone Plover is a magnificent bay horse, 16 1/2 hands in height, on particular short, strong legs, and great length, strength and substance, and is warranted as a sure foot getter. Independent of his great racing qualities, he is well calculated to elevate the character of all half bred stock, and to become the sire of the most valuable horses, which will be remarkable for size, spirit, endurance, and great action. He is himself of the most beautiful color, fine symmetry, great size, grand majestic action and carriage, all of which is inherited from ancestors the most renowned in the annals of the Turf of Great Britain. He is free from defects, and is marked with neither curved hocks, splints, spavins, ringbones, twisted ankles, upright joints, or any other imperfection, and perfectly sound in his wind. For further particulars address the subscriber, Plymouth, April 16, 1859. 18-18w THOMAS WILLIAMS, Plymouth, Michigan.

THE TROTTING STALLION

HAMBLETONIAN,

Will stand for mares the ensuing Season commencing April 4th, as follows:

At JOHN CLARK'S, Milford, Mondays and Tuesday;

At JOHN HATHAN'S, New Hudson, Wednesdays;

At SAM'L LATHROP'S, Northville, Tuesdays;

At JAMES ROOT'S, Plymouth, Fridays and Saturdays;

Leaving each place at 5 o'clock P. M.

From the general complaint of poor crops last year I have concluded to reduce the price of my horse for this season.

Terms.—\$10 the season; \$15 to insure.

Season money to be paid when the Mare is first served, or a good note given for the amount. Persons, parting with mares before foaling time will be held responsible for the season money. All mares not regularly returned will be held by the season. Pasture furnished at fifty cents per week. A good note will be accepted at the owner's risk. Season to close on the first of August, 1859. Grain will be received for insurance money, delivered at my farm on or before the first day of February 1860, at Detroit prices.

HAMBLETONIAN was awarded the First Premium at the Oakland County Fair, October, 1857.

At the State Fair in Detroit last fall his colts took more premiums than any other Stallion in the State.

Pedigree of Hambletonian.

HAMBLETONIAN was sired by Geo. Barney's horse Henry, of Whitehall, Washington county, New York—he by Imported Signal, out of a Messenger mare. Hambletonian's dam by Hamblin, granddam Bishop's Hambletonian who was sired by Imported Messenger. Hambletonian is 15 1/2 hand slight, weighs 1150 pounds; possessing fine action, with great powers of endurance; untrained, but shows good evidence of speed. Hambletonian is a beautiful bloodbay, black mane, tall and limbs, without a white hair upon him, and for style can not be excelled by any horse in the State.

HIRAM E. CADY, Agent.

THE YOUNG TROTTING STALLION,

KEMBLE JACKSON,

Will stand for mares the coming season, at Spring Brook Farm, adjoining the Village of Farmington, Oakland county, Mich., commencing April 4th.

Owing to the extreme hard times among farmers—loss of crops the past season, &c. I